

NEXUS

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CONTENTS

LETTERS TO THE EDITOR.....4	DARWINISM: A CRUMBLING THEORY—Part 2.....47
GLOBAL NEWS.....6	<i>By Lloyd Pye. Analysis of the fossil record suggests that humans could not have evolved from primates, so the logical conclusion is that we arrived intact or developed on Earth by extraterrestrial intervention.</i>
<i>News you may have missed, including protection for vaccine manufacturers under the US Homeland Security Act, the legalisation of Prozac for children, and a list of last year's 10 worst corporations.</i>	SECRETS OF THE LOST ARK.....54
CAN GLOBAL WARMING CAUSE AN ICE AGE?.....11	<i>By Laurence Gardner. Recent findings about the exotic properties of monatomic gold and platinum group metals are rediscoveries of an advanced alchemical science known by the priestly hierarchy in the ancient Middle East and Egypt.</i>
<i>By Dr Robert Gagolian. It seems counterintuitive, but global warming could lead to dramatic, abrupt cooling in regions currently warmed by the Gulf Stream, as has happened throughout Earth's history.</i>	THE TWILIGHT ZONE.....59
THE MEDICAL ASSAULT ON YOUNG WOMEN.....17	<i>By Steven McFadden. Guatemalan anthropologist Carlos Barrios, initiated into ancient Mayan secrets, says that the world, far from ending in December 2012, will be transformed—but we have much spiritual work to do ahead of these changes.</i>
<i>By Sherrill Sellman. As menstruation becomes increasingly medicalised, teenage girls are being prescribed the contraceptive pill and fluorine-based antidepressants to control everything from acne to irregular periods and depression, despite the risks.</i>	REVIEWS—Books.....65
THE BITTERSWEET STORY OF STEVIA.....23	<i>"Royal R. Rife – Humanitarian" by Gerald F. Foye</i>
<i>By Jenny Hawke. The sweet stevia herb has a long history of safe use in South America and Asia, yet it is illegal as a food or additive in many Western nations, just when alternatives to refined sugar and artificial sugar substitutes are desperately needed.</i>	<i>"The Golden Ratio" by Mario Livio</i>
ENIGMA: A CLOSE CALL FROM DEEP SPACE.....29	<i>"The Definitive Wee Book on Dowsing" by Hamish Miller</i>
<i>By José Chung. A Black Dwarf star, dubbed "Enigma", is calculated to be on a course that will take it within 300,000 km of Earth in March 2003, close enough to cause climatic and geophysical disturbances, but NASA has been keeping it quiet.</i>	<i>"Perpetual War for Perpetual Peace" by Gore Vidal</i>
DR PHIL CALLAHAN ON PARAMAGNETISM.....35	<i>"Wild Things They Don't Tell Us" by Reg Presley</i>
<i>Interview by Graeme Sait. Dr Phil Callahan's landmark studies of paramagnetic rock, soil fertility, plant nutrition and insect infrared communication have huge implications for sustainable agriculture.</i>	<i>"The Gods Were Astronauts" by Erich von Däniken</i>
SCIENCE NEWS.....43	<i>"Harnessing the Wheelwork of Nature" edited by Tom Valone</i>
<i>By Genesis World Energy. This consortium of cross-disciplinary visionaries claims to have developed special fuel cells for extracting hydrogen and oxygen from water, and is ready to license the technology.</i>	<i>"The Lost Testament: From Eden to Exile" by David Rohl</i>
	<i>"Secrets of the Exodus" by Messod Sabbah and Roger Sabbah</i>
	<i>"Universal Water" by West Marrin, PhD</i>
	<i>"Moses and Akhenaten" by Ahmed Osman</i>
	<i>"In Quest of Lost Worlds" by Count Byron de Prorok</i>
	<i>"The Bible Code 2: The Countdown" by Michael Drosnin</i>
	<i>"The Shining Ones" by Christian and Barbara Joy O'Brien</i>
	REVIEWS—Videos.....72
	<i>"Out of the Blue" produced by FCZ Media</i>
	<i>"Creating Prosperous Communities" produced by Alister Multimedia</i>
	<i>"Planet X" produced by Robert Sepehr</i>
	<i>"Magical Egypt: A Symbolist Tour" with John Anthony West</i>
	REVIEWS—CD-ROM.....72
	<i>"Virtual Egypt: A 360° Cybertour" with John Anthony West</i>
	REVIEWS—Music.....73
	<i>"Zen Connection" by various artists</i>
	<i>"Asian Groove" by various artists</i>
	<i>"Bhagavan Das Now" by Bhagavan Das</i>
	<i>"The Journey" by Jerry Brunskill</i>
	<i>"Unfolding" by Axiom of Choice</i>
	NEXUS BOOKS, VIDEOS, ADS, SUBS.....80-88

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STATEMENT OF PURPOSE

NEXUS recognises that humanity is undergoing a massive transformation. With this in mind, NEXUS seeks to provide 'hard-to-get' information so as to assist people through these changes. NEXUS is not linked to any religious, philosophical or political ideology or organisation.

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Editorial

Welcome again to NEXUS. As we go to print with this edition in mid-January 2003, my attention is upon several possible futures facing mankind.

First up is climate change and, in particular, the prospect of a sudden ice-age. It appears that glacial and polar ice is melting, triggering a change in the ratio of fresh to salty water in the oceans. This in turn is expected to trigger significant ocean current changes, especially with the Gulf Stream which is considered to regulate the climate of Europe.

Next are the rumours that Earth is about to receive a heavenly visitor in the form of a planetoid, a comet, an asteroid, a brown dwarf or a black dwarf star. As many readers are aware, there is a lot of information warning specifically that this visitor is going to be here in or by March 2003. We have selected an article by José Chung, which discusses a mysterious object photographed by NASA but removed from their databases. José has made his findings available for other amateur astronomers to check and follow.

There is also considerable debate on Mayan "end times". This issue we have an informative and positive article on the Mayan world view, which suggests that the planet, far from ending in December 2012 (as does the Mayan calendar, the Tzolkin), will be transformed—if we actively seek peace and choose a spiritual path.

Sherrill Sellman phoned me late last year (2002) and was all fired up about how drug companies are "preying" upon the ignorance of young women. Her article, titled "The Medical Assault on Young Women", is the result of her passion to alert all people to the unnecessary and ongoing "chemical castration" of women.

Another "must read" article is the interview with Dr Phil Callahan. This man is a legend! The impact of his research and insights into paramagnetism and nature will be felt for many generations to come. Just one of his findings is that plants emit infrared radiation, which magnifies scent molecules. Insects use their antennae to detect the source of these molecules. Healthy plants emit a different signal than unhealthy plants, and insects are more attracted to the nutritionally deficient plants.

At long last we have an article on Stevia. Stevia is a plant that yields an incredible sweetness. It's good for you, and it doesn't upset insulin levels. If you wish to get off refined sugar, get onto stevia (or xylitol, which was featured last issue and is already becoming a popular sugar alternative). The article also looks at efforts to keep stevia hidden from public view in the USA particularly.

We have something new and interesting in Science News (again), except this time it's not too technical, leaving you no excuse not to read it. It is an announcement by Genesis World Energy, a mysterious group of apparently benevolent-minded experts who have developed a viable alternative to coal, gas, oil and nuclear energy sources. I look forward hearing more about this technology. It could be what we all are using in years to come, if it gets the "thumbs up" from those who make such decisions.

Lloyd Pye is back with yet more evidence that humans could not have evolved from primates. I have received quite a few letters from upset readers that Lloyd dares to point out the errors in current thinking but doesn't suggest a replacement. I would point out to those of such thoughts that the author is not intending to suggest where or how life first came to be. He is merely pointing out that the theory that all life on Earth accidentally evolved from goo to humans is now in need of an upgrade or total replacement. Modern science's own findings are destroying Darwinism, and as far as I am concerned it is open season on better suggestions.

Laurence Gardner is back with an article that encapsulates his soon-to-be-released book, *Lost Secrets of the Sacred Ark*. Did the priestly hierarchies of the ancient Middle East and Egypt employ the mysterious properties of "white powder gold"?

As I write this editorial, the USA is on the brink of invading Iraq. Today I read of opinion polls which show that most people, including Americans, consider the USA—not Iraq, not North Korea, not Israel—as the country which is the biggest threat to world peace. Government leaders appear to be wondering if they can control the internal dissent of their respective populations. Civil disobedience is being planned across Europe, the UK, USA, Canada, Australia and elsewhere, and the authorities know this.

The real battle to watch for, however, is the battle for your mind. Examine regularly what you choose to believe about the world, and reflect your personal integrity via the manner in which you live. Now is the time to pray and act for peace.

Duncan

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Letters to the Editor ...

Dubya-speak Analysed

G'day Duncan: There's a letter from Michael Peck in the latest NEXUS [10/01], giving you a serve for "poor taste" in calling George W. Bush's intelligence into question.

By a funny coincidence(?), on the same morning that I received NEXUS there was a piece on the web that more or less said, "Hey, that may be the *good news!*" Perhaps it could be published under Global News—I'd guess at about 450 words.

Like your reader, I have thought that "the Shrub" was just a figurehead, and not a very smart one either...a bit like any national leader these days—ho hum, just another poodle for the real powerbrokers.

Have a look at the website www.commondreams.org/headlines02/1128-02.htm and you will see an interesting piece which analyses his speech patterns—when he stumbles, when not, etc.—and reaches the conclusion that the man is a sociopathic personality: a hostile, angry and dangerous man.

There is a suggestion that his minders are so careful to protect him from protesters because he would lose the plot and go ape if he had to face them.

When he speaks of retribution, killing, war, revenge and so on, he is as smooth as silk. It is when he speaks of matters requiring compassion, understanding, altruism, kindness—that's when he makes those "hilarious" Bushisms.

Somehow, I don't find them so funny now.

B. Tree, Tasmania, Australia

Cosmic Impacts & Ice Ages

David Wojick's article on global warming is good as far as it goes [NEXUS 9/06]. The longer view, that would put our little Age of Reason into better perspective, is more troublesome.

Ever since Aristotle proclaimed that things do not fall out of the sky, it has been the tradition of the upper class and

the intellectual institutions that serve them to be uniformitarian. It is no different today with our Milankovitch model of climate change.

The first question, as I see it, is: where are those cosmic impact events in the geological and climate record over the past million years?

Impact scientists predict that 10 or so such events would have occurred. Since these would have influence greater by many orders of magnitude than anything in the Milankovitch model, they should come first in our considerations.

A major oceanic impact creating a spike down in temperature with cloud cover, then a spike up as the oceans warm with the opening of volcanic vents—herein is the energy to produce massive glaciation. This would be followed by a damped oscillation of glacial melting, ocean cooling, dry cool land weather, glacial melting ceasing and the ocean warming again.

This cycle is marked in glaciers the world round. Each subsequent cycle is less pronounced, tending toward the end point, the natural state of the planet: ice age.

This and other matters are extensively reviewed under the heading, "19th century Victorian science and its stranglehold on the modern academy", on my website <http://home.earthlink.net/~cjbecker121/>.

Cheers,

C. J. Becker, cjbecker121@earthlink.net

Corporate State Agenda

In NEXUS, vol. 10, no. 1, I see John M. of Tampa, Florida, giving the usual American anti-communist and anti-socialist diatribe. When are our cousins on the other side of the pond going to realise they are not the same?

Although the Russian Communist Party often uses the word "socialist", they are merely hijacking the word.

Socialism, western European style, is a very democratic political system. That is totally at odds with the now discredited and undemocratic form adopted in the East. Indeed, although I do not claim to be a Christian myself, I do find many parallels in the teachings of Jesus and socialism as we in the UK understand it.

Hitler used left-wing language at the outset to rally fairly moderate people to his cause. That doesn't mean that National Socialism, as he saw it, and the Socialism of the UK Labour Party have anything at all in common. Hitler was an opportunist with a criminal agenda—as was Stalin, of course. But where John M. is missing the point is the agenda of the Corporate State, if you can call it that.

The USA has a fundamental weakness that political office is won through corporate backing. We have it to a lesser degree here, too. But all cabinet ministers here have to be elected as constituency MPs first. And they can lose their seats and their office quite easily through misconduct.

The US system has a weakness that all ministers are appointees of the President, and he is a nominee of his financial backers. *There* is the problem. The system in the USA invites "Corporate Communism".

Changing the system of government is obviously one of the challenges facing you at the other side of the pond. The other is getting your facts straight, and understanding that the USA is not the whole world.

Terry Hall, United Kingdom

TV Live from the Moon?

Sir: I am a television engineer with WTCI in Chattanooga. I am also an extra-class Ham operator. I would like to offer something for your study.

In 1969, all cameras that I knew of were vidicon tube (the average camera and lens in our studio weighed about 200 lb).

There was no CCD at that time. This took massive bandwidth (about 7 MHz), even for black and white. All transmitters were tube, as SMD (surface mount devices) had not yet been invented (check with Harris Transmitter or Gates; they were the biggest and would have had to be involved).

Try to find out these things: who made the video equipment; who made such a power source (imagine the amount of electricity it would take to get a clear picture back through our atmosphere, 7 MHz wide from the Moon; Mpeg video compression was not around either); how this was transported; who made such a transmitter; who made the antenna array (both ends) and how it was deployed; and who had those contracts.

I believe you will find that the technology to do those things was impossible in 1969!

Thanks,

Mitch Dickson, Engineering WTCI, Chattanooga, TN, USA, mitch@volstate.net, website <http://www.volstate.net/~mitch>

Beware Plastics & Vaccines

Dear Sir: I would like to thank NEXUS for the many articles over the years which have helped me and family and friends.

I would like to give you one example. A few years ago my grandson, aged just two years, developed a hernia in his testicle which made him miserable. Surgery, the apparent only course of treatment, would not be available for several months.

Two articles, "The Perils of Pasteurised Milk" [2/27] and "The Problem with Poisonous Plastics" [3/06] contributed to a cure overnight. How so?

Well, he was regularly drinking kefir (made with raw cow's milk), which was wonderful for treating his eczema problem both internally and externally (when rubbed in vigorously).

I was keeping the kefir in plastic bottles. As soon as I changed to glass bottles, the problem of the hernia went

... more Letters to the Editor

NB: Please keep letters to approx. 150 to 250 words in length. Ed.

away. I deduced that the living enzymes attacked the plastic and the child was ingesting synthetic oestrogen (phthalates?). So readers, beware! Never wrap or contain living foods in plastics.

The articles on vaccinations have also been very helpful. As a result, my daughter is labelled a conscientious objector for not having her three children vaccinated. My daughter-in-law, however, did not listen to my advice and her child has developed autism, almost certainly due to the MMR vaccine.

Please, is there any NEXUS reader who can give advice in treating autism?

C. Brough, Tasmania, Australia

African View on US Terror

Sir: After reading NEXUS Magazine, vol. 9, no. 1, many of us in Africa could not believe that someone else on another continent is aware of the terrorist regime of the democratically elected government of the United States of America.

Angolans died in the hundreds of thousands at the hands of the US government, who armed and financed UNITA under Savimbi to destabilise the government of Angola.

On September 11, 2001, the USA harvested its terrorist fruits planted all over the world.

Chief Igyo Ali, Gboko, Benue state, Nigeria

[Dear Chief Ali: I regret to inform you that the US government deliberately does not tell the American people about what their nation does overseas. Ed.]

Optimistic about Planet X

Dear Duncan: Glancing through the Centre for Alternative Technology's mail order catalogue, I saw NEXUS magazine's advertisement and thus became a subscriber.

What a revelation! I had no idea that so much information

was kept from the public eye. Now my head's spinning, not only from what I've discovered through NEXUS but from reading some of the books reviewed in it.

Jonathan Eisen's *Suppressed Inventions and Other Discoveries* really is an eye-opener. I've made a dental appointment to have all my fillings containing mercury replaced.

As a result of reading the latter book and Alan E. Alford's *Gods of the New Millennium* (a few years ago now), along with many other "new age" publications on archaeology, astronomy, extraterrestrial visitors in ancient times and UFOs today, and books about religions, astrology, radionics, dowsing, health and psychic development, I've come to the conclusion that it's all interlinked and now is definitely the Age of Enlightenment. "Scales" dropping from our eyes...

After extensive reading on the subject, I'm sure that UFOs do exist, especially as three people known by me and my parents saw a UFO back in the 1950s.

In the past, I'd become despondent after reading some "doom and gloom" books—principally those of Maurice Cotterell that gave warnings about sunspots affecting the Earth and its inhabitants, and his Maya prediction that the world as we know it will end in 2012. There was nothing I could do about the Sun's cycle, and so I decided to "cross my fingers" and hope for the best.

But then the other day I read *The Orion Prophecy*, which correlates stories of Atlantis with Egyptian prophecies and those of the Maya, and I was again thrown into despair because the picture the author, Patrick Geryl, painted gave no hope for mankind's survival.

But there is hope and I cling to it. I am hoping that the theory about visiting extraterrestrials is true. I am hoping that there is a Planet Nibiru with a 3,600-year orbit around the

Sun, that it is now returning into our part of the solar system (Planet X due in May 2003) and will be well out of the Sun's way by 2012; that it is the extraterrestrials' planet and that the UFOs that have been sighted since the 1940s have been coming from there as the planet travels nearer to Earth; and I'm hoping that they'll come and rescue some of us.

"One man in the field will be taken, the other not; one woman in the mill, the other not"—perhaps judged by the condition of their DNA, who knows? Maybe extraterrestrials are already doing this: there's enough evidence from people who seem to have been abducted and subjected to medical examinations. Maybe they're putting together a "Noah's ark" sperm bank?

All this might seem far-fetched, but it's a ray of hope. Pessimists attract negativity; optimists attract beneficial help... I know, because I'm an optimist.

Yours sincerely,

C. S. Gabriel (a British resident in France)

[Dear C. S.: Your letter is also a summary of the feedback of hundreds of readers of NEXUS from around the world. Thank you. Ed.]

Embracing the Unknown

Duncan: We hope this letter finds you well and in high spirits. We would like to thank you, and of course everyone else involved, for such informative reading. You have many "friends" among the thousands, if not millions, of readers around the globe.

NEXUS opened my eyes up to many windows and helped me understand many facets in my life. We came upon your magazine seven years ago and have never looked back since. Your magazine has helped us understand what we're going through, and instead of fearing the unknown we embrace it through understanding.

I have to admit that if it weren't for my willingness to

read, I would still be ignorant and spoon-fed information like many others. I suppose it's not their fault: society as a whole has become reliant upon "others" to tell them what they need to do and, as an adverse reaction, they point fingers to blame. The responsibility in the end is ours, which most of us hate to admit.

Thank you again for opening our minds, hearts and spirits. To understand the world and our existence is to be open to all possibilities.

We are imperfect beings with "nothing" to lose but our individuality. We have the power; we are the power. Some of us are slowly waking up and opening our eyes for the first time. The world is not what it seems.

Love and light,
Friend

[Dear Friend: To understand that the responsibility in the end is ours, is a sign of spiritual maturity. Ed.]

An Etheric Food Chain?

Dear Duncan: A question for your readership: if minerals are consumed by plants, plants consumed by animals, animals consumed by humans, humans are consumed by...?

I'm thinking more along the lines of thought/auric emanations here, rather than the physical food chain. We humans in our arrogance presume to be at the top thereof, but I suspect otherwise.

I wonder if someone may have some insight into how we fit into this particular aspect of the scheme of things.

Kind regards,

Darren S., Towradgi, NSW, Australia

[Dear Darren: May I suggest you read "Far Journeys" by Robert Monroe, and/or "The Thread of Infinity" by Jon Whistler. Both books involve discussion and utilisation of the concept that our emotional output is "nourishment" for other entities. The Koran mentions the Jinn, who were said to feed off and influence the emotions of unaware people. Ed.]

NEGATIVE IONS WIPE OUT HOSPITAL INFECTIONS

Repeated airborne infections of the bacteria *Acinetobacter* in an intensive care ward have been eliminated by the installation of air ionisers.

In the first such epidemiological study, researchers found that the infection rate fell to zero during the year-long trial.

"We were absolutely astounded to find such clear-cut results," said engineer Clive Begg at the University of Leeds.

Stephen Dean, a consultant at the St James's Hospital in Leeds, where the trial took place, said: "The results have been fantastic—so much so, that we have asked the university to leave the ionisers with us."

The ionisers produce negative ions that collide with suspended particles and give them a charge. The scientists believe charged particles aggregate and fall out of the air, thereby disinfecting the atmosphere and stopping the transmission of infection.

Research by electronics company Sharp has shown that positive and negative ions produced by their air conditioning systems can inactivate viruses, including those that cause influenza. But this new study is the first to link such an effect with negative ions to reduced infections in hospitals.

(Source: New Scientist, January 3, 2003, <http://www.newscientist.com/news/news.jsp?id=ns99993228>)



AIR POLLUTION CAN CAUSE GENETIC MUTATIONS

Six years ago, scientists found that Sherring gulls living near steel mills around the harbour in Hamilton, Ontario, Canada, tended to have high DNA mutation rates. These mutations were then transferred to the next generation of gulls, increasing the offspring's chances of developing genetic diseases like cancer and birth defects. Researchers suspected at the time that air pollution was causing the mutations, but they couldn't eliminate other factors, such as polluted water or contaminated fish, that also could have been responsible.

Now, other scientists have published a paper indicating that air pollution is indeed the likely culprit behind the

mutations. What's more, there's no reason why human DNA should be immune from the same pollution. Our genes may also be damaged and then inherited by our children.

Researchers say there is an urgent need to investigate the genetic consequences associated with exposure to chemical pollution through the inhalation of urban and industrial air. Indeed, with the vast majority of us now living in urban areas and millions of people exposed to air pollution from steel mills, coal-fired power plants and automobiles, we cannot afford simply to accept the industry line of doing nothing—especially when it could be the next generation that

suffers the most.

(Source: Environment Network News.com, January 7, 2003)

IMF APPROVES SINGLE CURRENCY FOR GULF STATES

The International Monetary Fund (IMF) has approved plans that will achieve monetary union for Persian Gulf states by 2005 and the launch of a single currency by 2010. The IMF has mapped out the steps that will be taken during the unification period to establish the single Gulf currency within the first decade of the new millennium.

The new currency will initially be limited to members of the Gulf Cooperation Council, which includes some of the most wealthy nations on Earth. The GCC comprises Saudi Arabia (the world's most important source of oil) as well as Bahrain, Kuwait, Oman, Qatar and United Arab Emirates.

(Sources: "On a Common Currency for the GCC Countries", IMF's Policy Discussion Paper No. 02/12, December 2, 2002; Common Currency, IMF's Finance & Development magazine, vol. 39, no. 4, December 2002)

LAWSUIT CHARGING LAB ORIGIN OF AIDS TO BE FILED

In a November 20, 2002, letter from the Office of the Secretary of the United States Department of Health and Human Services, AIDS origin researcher Boyd E. Graves, JD, was given 60 days to file suit in the US federal court of his choosing.

"The people have forced the right to

The Digital Camera



sue the United States over their 'creation', 'production' and 'proliferation' of HIV/AIDS through the secret federal virus development program, the US Special [AIDS] Virus program (1948–1978)," said Graves.

"The yearly progress reports of the secret program provide the irrefutable narrative proof of the linkage of experiment to the flowchart 'research logic' of the African Holocaust. This best explains how Black people account for 13% of the population and 50% of all new AIDS cases."

Graves, a civil rights lawyer and decorated US Navy veteran, filed a similar complaint with Ohio's Federal Court in 1998, resulting in a 33-month legal battle and an appeal in 2001 to the US Supreme Court.

His lawsuit prompted Congress to request an investigation into the missing appropriations of the secret federal virus development program, Special Virus, through the US General Accounting Office.

The US government's official report was made public following the terrorist attacks of September 11, 2001, and was highly criticised as being a "total white-wash" by many independent investigators, including Professor Robert Lee and Dr Leonard G. Horowitz (author of *Emerging Viruses: AIDS & Ebola – Nature, Accident or Intentional?*).

Graves and his supporters say they are confident the evidence of the laboratory birth of AIDS is irrefutable.

"We can show through the progress reports of the secret program that the original name of HIV was ESP-1 virus, developed in accordance with the phases of the flowchart," Graves said.

"The United States purposefully and intentionally complemented the 'small-pox' vaccine that went to Africa and the 'hepatitis B' vaccine that was given to homosexuals that the United States recruited for that purpose."

Graves said he is hopeful people support his efforts by downloading the 1971 flowchart document from his website, <http://www.boydgraves.com>, and by writing to elected and appointed health officials.

"We have found the wellspring of the genesis of AIDS," said Graves. "It is our nation state; it is us."

(Source: Boyd Graves news release, November 29, 2002, <http://www.boyd-graves.com/news/112802.html>)

US HOMELAND SECURITY ACT PROTECTS VACCINE-MAKERS

It had been a mystery in Washington for weeks. Just before US President George W. Bush signed the Homeland Security Bill into law, an unknown member of Congress inserted a provision into the legislation that blocks lawsuits against the maker of a controversial vaccine preservative called *thimerosal*, used in vaccines that are given to children.

Drug giant Eli Lilly and Co. makes *thimerosal*. It's the mercury in the preservative that thousands of parents say has caused autism in their children.

But nobody in Congress would admit to adding the provision, until House Majority Leader Dick Army (R-Texas) told CBS News that he did it to keep vaccine-makers from going out of business under the weight of mounting lawsuits. "I did it, and I'm proud of it," he said. "It's a matter of national security. We need their vaccines if the country is attacked with germ weapons."

Rep. Dan Burton (R-Ind) isn't buying it. The grandfather of an autistic child, Burton says Army slipped the provision in at the last minute, too late for debate.

Critics say the Bush family and the current administration have too many ties to Eli Lilly: there's President Bush's father, who sat on the company's board in the 1970s; White House budget director Mitch Daniels, once an Eli Lilly executive; and Eli Lilly CEO Sidney Taurel, who serves on the President's Homeland Security Advisory Council.

In November, attorneys for the Bush administration asked a federal court to

order that documents on hundreds of cases of autism allegedly caused by childhood vaccines be kept from the public.

Attorneys for the families of hundreds of autistic children charged that the government was trying to keep the information out of civil courts, where juries might be convinced to award large judgments against vaccine manufacturers.

More significantly, this last-minute slipping-in of hidden provisions raises other issues.

Rep. Dennis Kucinich (D-Ohio), said: "The ability of a special interest group to secretly insert provisions into law for its own narrow benefit and to the detriment of the public interest raises fundamental questions about the integrity of our government."

(Sources: Reuters, November 26, 2002; CBS Worldwide, December 17, 2002)

PHYSICIST BLOWS WHISTLE ON US MISSILE DEFENCE

The credibility of President Bush's multibillion-dollar missile defence plans are being questioned by leading scientists after claims that the results of key tests were falsified.

The criticism is led by Theodore Postol, a physicist and persistent missile defence critic at Massachusetts Institute of Technology, who has said that the institute is sitting on what is potentially "the most serious fraud that we've seen at a great American university".

After months of demanding an inquiry into the affair, Ed Crawley, Chairman of MIT's Aeronautics and Astronautics



Department, has reversed previous refusals and recommended an investigation.

The issue in question goes to the heart of missile defence technology. The United States unilaterally withdrew last year from the 1972 Anti-Ballistic Missile Treaty with Russia in order to pursue the controversial proposed system, which is designed to intercept enemy warheads in flight—a feat likened to hitting a bullet with a bullet.

Dr Postol and his criticisms cannot be dismissed lightly. After the Gulf War, he challenged the Pentagon's claims for the success of its defensive *Patriot* missiles, saying they had intercepted few, if any, Iraqi *Scud* missiles. Despite initial ridicule, his assertion is now accepted. (Source: *Times Online*, January 3, 2003)

NEW INVENTION SECRECY ORDERS REPORTED

The United States government invoked the Invention Secrecy Act of 1951 to impose new secrecy orders on 139 patent applications during fiscal year 2002, thereby blocking their publication. A total of 4,792 secrecy orders remained in effect at the end of the year, according to statistics compiled by the Patent and Trademark Office.

Secrecy orders can be imposed on patent applications at the discretion of government agencies whenever, in their judgement, disclosure of the invention could be "detrimental to national security".

The Invention Secrecy Act is one of two laws that permit the government to

prevent publication of privately generated information. (The other law is the Atomic Energy Act.) The constitutionality of such authority, which appears to be at odds with the First Amendment, has never been tested in court.

Of the 139 new secrecy orders issued last year, 37 were imposed on private inventors or businesses who developed their inventions without government funding. Such orders, which are referred to as "John Doe" orders, are the most potentially problematic from a constitutional point of view.

(Source: *Secrecy News*, no. 1, January 6, 2003; statistics at <http://www.fas.org/sgp/othergov/invention/stats.html>)

MAGNETIC POLE SHIFT DUE

Scientists have found large holes appearing in the Earth's magnetic field, suggesting that the North and South poles are preparing to reverse positions in a magnetic flip. A period of chaos could be imminent when compasses no longer point north, migrating animals head in the wrong direction and satellites are burnt up by solar radiation.

The holes lie over the South Atlantic and the Arctic. The changes were revealed after detailed data from the Danish Ørsted satellite were analysed. Results were compared with data from earlier satellites.

The speed of the change has surprised scientists. Nils Olsen, of the Centre for Planetary Science in Denmark, one of several centres analysing the data, said that the Earth's core appeared to be undergoing dramatic changes. "This

could be the state in which the Earth's geodynamo operates before reversing."

Andy Jackson, a specialist in geomagnetism at Leeds University, said a change was long overdue. "Such flips normally happen every 500,000 years, but it has been 750,000 years since the last one."

(Source: *Sunday Times*, Jan 12, 2003)

BRITISH DOCTOR BLASTS CHEMOTHERAPY AS WORTHLESS

Who would have believed that the prestigious *New England Journal of Medicine* would applaud an alternative cancer therapy and, in the same article, blast chemotherapy as worthless?

Well, it happened in the December 12, 2002, issue, in a review by James Spencer Malpas, MD, DPhil, of St Bartholomew's Hospital, London, UK. You can find the article at the webpage <http://content.NEJM.org/cgi/content/full/347/24/1986>, if you're willing to fork out \$10, but, for those who don't want to, here are some key quotes.

Quote #1: "He found the evidence in favour of conventional treatment unconvincing and opted for such alternative therapies as Gerson therapy with its strict diet, vitamins and enemas. High-dose vitamin C and high-dose vitamin D, both contraindicated in the orthodox treatment of multiple myeloma, were later added to the regimen. What is evident is that this was the right therapy for him."

Quote #2: "The irony of the whole situation is that a recent randomised trial of treatment for stage-1 multiple myeloma by Riccardi and colleagues (*British Journal of Cancer* 2000;82:1254-60) showed no advantage of conventional chemotherapy over no treatment."

(Source: *Consumer Advocate Tim Bolen*, Dec 26, 2002, via http://www.wellnesstoday.com/doctors_question_chemo.htm)

OESTROGEN IS A CARCINOGEN

A United States government report has for the first time identified oestrogen-containing drugs as cancer-causing agents.

Steroidal oestrogens (estrogens) were added to the National Toxicology Program list because of new research data linking the compounds to an increased risk of cancer of the endometrium, or lining of the uterus. They have also been associated with a rise in the breast cancer risk.

Steroidal oestrogens are used in hormone replacement therapy for



menopausal women, and physicians are supposed to weigh the risks of cancer against the benefits of the drugs.

(Source: Reuters, December 11, 2002; see Sherrill Sellman's article this issue)

FDA APPROVES PROZAC FOR CHILDREN AND TEENAGERS

On January 4, 2003, the US Food and Drug Administration approved Eli Lilly & Company's Prozac (fluoxetine) to treat depression and obsessive compulsive disorder (OCD) in children and adolescents aged seven to 17 years.

According to the FDA, Prozac is the first selective serotonin reuptake inhibitor (SSRI) to receive approval for treating depression in children.

Indianapolis-based Lilly lost its patent protection on Prozac in August 2001. The drug was once a blockbuster, pulling in sales of US\$2.5 billion in 2000. Since losing patent protection, several generic formulations of Prozac have flooded the US market, cutting sharply into Lilly's revenues. In the meantime, Lilly introduced Sarafem—Prozac by another name—to treat "PMDD" in women.

(Source: Reuters, January 4, 2003; also see Sherrill Sellman's article this issue)

POLICE FRAMED GENOA ANTI-GLOBALISATION ACTIVISTS

Police in Genoa, Italy, have admitted to fabricating evidence against anti-globalisation activists in an attempt to justify police brutality during protests at the July 2001 G8 Summit. More than 100,000 people participated in the 2001 Genoa protests, most of them peacefully.

According to BBC and Deutsche Presse-Agentur reports, a senior Genoa police officer, Pietro Troiani, has admitted that police planted two Molotov cocktails in a school that was serving as a dormitory for activists from the Genoa Social Forum. The bombs were apparently planted to justify the brutal July 22 raid on the school, when 200 officers took the sleeping activists by surprise. Another senior officer has admitted to faking the stabbing of a police officer in order to frame protesters.

These revelations have emerged during a parliamentary inquiry into police conduct. Three police chiefs have been transferred and at least 77 officers have been investigated on brutality charges.

(Source: Fairness & Accuracy In Reporting [FAIR], January 10, 2003, <http://www.fair.org>)

THE 10 WORST CORPORATIONS OF 2002

The year 2002 will forever be remembered as the year of corporate crime. For *Multinational Monitor's* 10 Worst Corporations of 2002 list, we included only Andersen from the ranks of the financial criminals and miscreants. Andersen's assembly-line document destruction certainly merits a place on the list. (Citigroup appears on the list as well, but primarily for a subsidiary's involvement in predatory lending, as well as the company's funding of environmentally destructive projects around the world.) As for the rest, we present a collection of polluters, dangerous pill peddlers, modern-day mercenaries, enablers of human rights abuses, merchants of death and beneficiaries of rural destruction and misery.

Multinational Monitor's 10 Worst Corporations of 2002, appearing in alphabetical order, are:

- **Arthur Andersen**, for a massive scheme to destroy documents related to the Enron meltdown. "Tons of paper relating to the Enron audit were promptly shredded as part of the orchestrated document destruction," a federal indictment against Andersen alleged. "The shredder at the Andersen office at the Enron building was used virtually constantly and, to handle the overload, dozens of large trunks filled, with Enron documents" to be shredded, were sent to Andersen's main Houston office. Andersen was convicted for illegal document destruction, effectively putting the company out of business.

- **BAT**, for operating worldwide programs supposedly designed to prevent youth smoking but which actually make the practice more attractive to kids (by suggesting smoking is an adult activity), continuing to deny the harmful health effects of second-hand smoke, and working to oppose efforts at the World Health Organization to adopt a strong Framework Convention on Tobacco Control.

- **Caterpillar**, for selling bulldozers to the Israeli Defense Forces (IDF), which are used as an instrument of war to destroy Palestinian homes and buildings. The IDF has destroyed more than 7,000 Palestinian homes since the beginning of the Israeli occupation in 1967, leaving 30,000 people homeless.

- **Citigroup**, both for its deep involvement in the Enron and other financial scandals and its predatory lending practices through its recently acquired subsidiary, The Associates. Citigroup paid US\$215 million to resolve Federal Trade Commission (FTC) charges that The Associates engaged in systematic and widespread deceptive and abusive lending practices.

- **DynCorp**, a controversial private firm which subcontracts military services with the US Defense Department, for flying planes that spray herbicides on coca crops in Colombia. Farmers on the ground allege that the herbicides are killing their legal crops, and exposing them to dangerous toxins.

- **M&M/Mars**, for responding tepidly to revelations about child slaves in the West African fields where much of the world's cocoa is grown, and refusing to commit to purchasing a modest 5% of its product from Fair Trade providers.

- **Procter & Gamble**, the manufacturer of Folger's coffee and part of the coffee roaster oligopoly, for failing to take action to address plummeting coffee bean prices. Low prices have pushed tens of thousands of farmers in Central America, Ethiopia, Uganda and elsewhere to the edge of survival, or destroyed their means of livelihood altogether.

- **Schering Plough**, for a series of scandals, most prominently allegations of repeated failure over recent years to fix problems in manufacturing dozens of drugs at four of its facilities in New Jersey, USA and Puerto Rico. Schering paid US\$500 million to settle the case with the US Food and Drug Administration.

- **Shell Oil**, for continuing business as usual as one of the world's leading environmental violators—while marketing itself as a socially and environmentally responsible company.

- **Wyeth**, for using duplicitous means, and without sufficient scientific proof, to market hormone replacement therapy (HRT) to women as a fountain of youth. Scientific evidence reported in 2002 showed that long-term HRT actually threatens women's lives, by increasing the risks of breast cancer, heart attack, stroke and pulmonary embolism.

What's the lesson to be drawn from the 10 Worst Corporations list? Not only are Enron, WorldCom, Adelphia, Tyco and the rest indicative of a fundamentally corrupt financial system, they are representative of a rotten system of corporate dominance.

(Source: Multinational Monitor, January 2003, <http://www.multinationalmonitor.org>)

CAN GLOBAL WARMING CAUSE AN ICE AGE?

Changes to the ocean currents due to an influx of fresh water could have drastic, abrupt effects on the climate, particularly in the Northern Hemisphere regions currently warmed by the Gulf Stream.

by Dr Robert B. Gagosian
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A TRIGGER FOR ABRUPT CLIMATE CHANGE

Over the past two decades, we have heard about greenhouse gases and the idea that our planet is gradually warming. I'd like to throw a curveball into that thinking—specifically the "gradually warming" part. This new thinking is little known and scarcely appreciated by policymakers and world and business leaders—and even by the wider community of natural and social scientists. But evidence from several sources has amassed and coalesced over the past 10 to 15 years. It points to a completely different—almost counterintuitive—scenario.

Global warming could actually lead to a big chill in some parts of the world. If the atmosphere continues to warm, it could soon trigger a dramatic and abrupt cooling throughout the North Atlantic region—where, not incidentally, some 60 per cent of the world's economy is based.

When I say "dramatic", I mean that average winter temperatures could drop by five degrees Fahrenheit over much of the United States, and by 10 degrees in the northeastern United States and in Europe. That's enough to send mountain glaciers advancing down from the Alps...to freeze rivers and harbours and bind North Atlantic shipping lanes in ice...to disrupt the operation of ground and air transportation...to cause energy needs to soar exponentially...to force wholesale changes in agricultural practices and fisheries...to change the way we feed our populations. In short, the world—and the world economy—would be drastically different.

And when I say "abrupt", I mean that these changes could happen within a decade and they could persist for hundreds of years. You could see the changes in your lifetime, and your grandchildren's grandchildren will still be confronting them.

And when I say "soon", I mean that in just the past year we have seen ominous signs that we may be headed toward a potentially dangerous threshold. If we cross it, Earth's climate could switch gears and jump very rapidly—not gradually—into a completely different mode of operation.

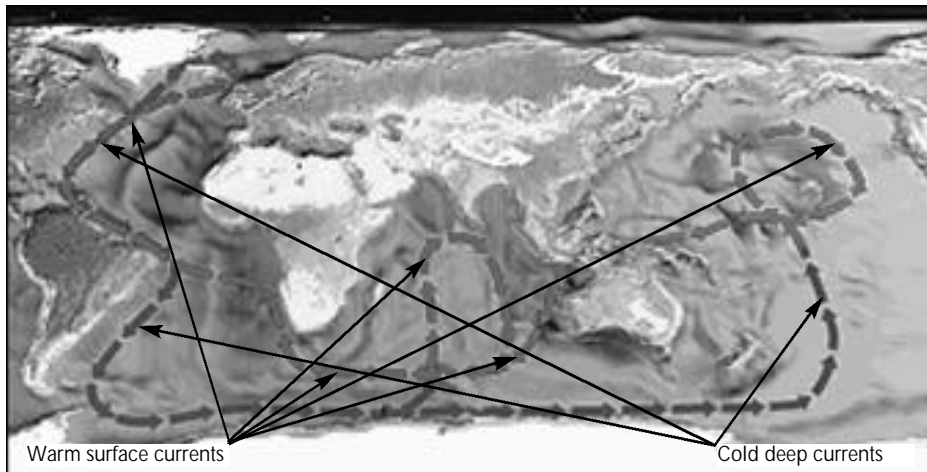
This is not something new under the Sun. It has happened throughout Earth's history, and it could happen again.

THE OCEAN CIRCULATION SYSTEM

The key to these climate shifts is that Earth's climate is created and maintained by a dynamic system of moving, interacting parts. Earth's climate system has two main components. The first one you are all familiar with by watching your local TV meteorologist or The Weather Channel. It is the atmosphere, which circulates heat and moisture around the globe. But, in fact, the atmosphere redistributes only about half of the energy that the Earth receives from the Sun. The other half is transported around our planet by a circulation system that is equally important, but far less understood: the ocean. The ocean isn't a stagnant bathtub. It circulates heat around the planet like the heating and cooling system in your house. The atmosphere and oceans are equal partners in creating Earth's climate.

The atmosphere is a rabbit. It moves quickly. Rapid changes in atmospheric circulation cause storms, cold spells or heat waves that play out over several days. The ocean, on the other hand, is a turtle. It may take years or decades or even millennia for similar "disturbances" to circulate through the ocean. But the ocean is a *big* turtle. It stores about 1,000 times more heat than the atmosphere does. So changes in ocean circulation can set the stage for large-scale, long-term climate changes.

One example that you may be familiar with is El Niño. Every few years, oceanic conditions shift and surface water temperatures in the eastern tropical Pacific get



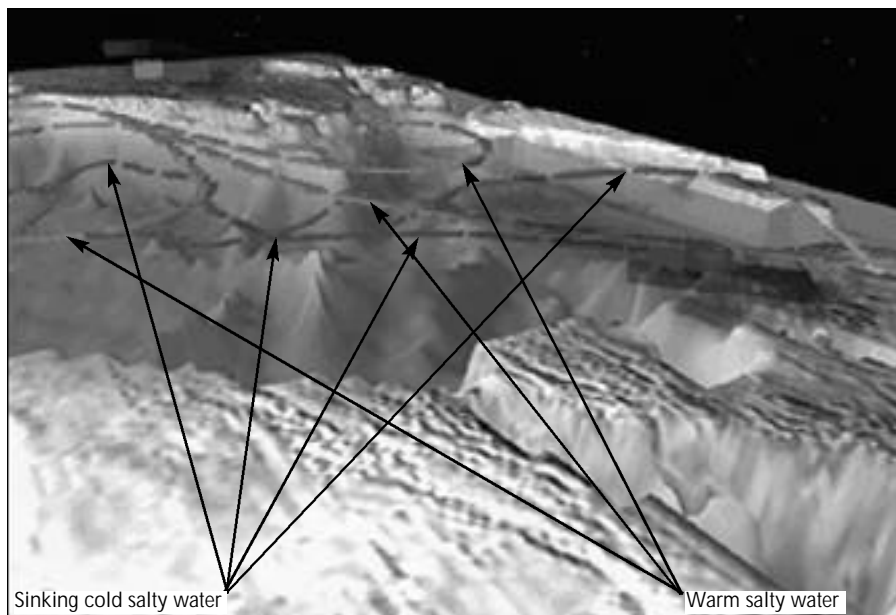
A schematic of the ocean circulation system, often called the Great Ocean Conveyor, that transports heat throughout the world's oceans. Red arrows indicate warm surface currents. Blue arrows indicate cold deep currents. (Illustration by Jack Cook, WHOI; see webpage http://www.whoi.edu/home/about/whatsnew_abruptclimate.html for colour illustration and animation.)

warmer. The atmosphere above the ocean shifts, too. El Niño rearranges worldwide wind and rainfall patterns, causing destructive droughts, floods, storms and forest fires. Not to downplay El Niño in the least, because it causes grave human suffering and billions of dollars in damage, but El Niño is relatively short-lived. It lasts only a year or two.

The climate changes I'm concerned about last longer and involve the ocean circulation system that spans the entire globe—a system which we often call the Great Ocean Conveyor.

The Great Ocean Conveyor is the ocean's major heat-circulating system. The ocean keeps our planet from overheating by transporting heat north and south, from the equator to the poles, in currents travelling near the ocean surface. In the Atlantic, the Conveyor removes heat from the Southern Hemisphere and releases it to the Northern Hemisphere.

The most famous and most important of these currents is the Gulf Stream. The vast Gulf Stream transports the equivalent



The Great Ocean Conveyor is propelled by the sinking of cold salty (and therefore denser) waters in the North Atlantic Ocean (blue arrows). That creates a void that pulls warm salty Gulf Stream waters northward (red arrows). The Gulf Stream gives up its heat to the atmosphere above the North Atlantic Ocean, and prevailing winds (large red arrows) carry the heat eastward to warm Europe. (Illustration by Jack Cook, WHOI; see WHOI website for animation.)

volume of 75 Amazon Rivers. It carries heat absorbed in the tropics, and moves up the East Coast of the United States, then northeastward toward Europe.

When the Gulf Stream's warm, salty waters reach colder latitudes, they give up their heat to the atmosphere. The atmosphere in the North Atlantic region warms by as much as 10 degrees Fahrenheit. Prevailing winds carry the heat eastward into Europe. That's one reason why London, England—which is located at the same latitude as Calgary and Edmonton, Canada—has warmer winters than New York, which is hundreds of miles farther south.

When the Gulf Stream's waters reach the Labrador, Greenland and other northern seas and lose their heat to the atmosphere, they become colder and hence denser. The waters are also relatively salty. Salty water is denser than fresher water, so the whole salty mass begins to sink to great depths.

When this sinking mass of cold water reaches the Abyss, it then flows at deep levels of the ocean, from the North Atlantic southward into the South Atlantic.

The plunge of this great volume of cold, salty water propels the Great Ocean Conveyor. And on the back end, it creates a void that actively pulls the Gulf Stream northward to replace the waters that are sinking.

It's a pretty neat system. We have been operating under the climate conditions created by this beneficent oceanic heating, ventilation and cooling system for centuries.

But what if this system weren't operating today? What if cold North Atlantic waters didn't sink and warm equatorial waters weren't drawn in to replace the sinking waters? Then the North Atlantic region would be a much different, much colder place.



Ice sheets reveal annual layers, which scientists can analyse to reconstruct the history of precipitation and air temperatures 100,000 years in the past. (Photo by Lonnie Thompson, Ohio State University)

RECONSTRUCTING THE PAST

The vast majority of us go about our business thinking that Earth's climate system has always been this way, and always will be. But that is just not the case. In fact, we know that the Great Ocean Conveyor has indeed shut down—stopped operating—in the past.

We know this by examining truly interesting and valuable natural archives that record past changes in Earth's climate. For example, we can see layers within ice sheets in Greenland or in high elevations in the Andes Mountains in South America. This layering is caused by variations in the amount of snow that fell on the top of the ice sheet in the past.

The light and dark bands within the ice sheet show an annual cycle of dust in the atmosphere, so each couplet reflects the amount of snow that fell in one year. By analysing the chemistry of the ice itself, scientists can determine the temperature of the atmosphere when the snow was produced.

Thus, from a single ice sheet record, it is possible to reconstruct the history of precipitation and air temperature in a region. For very old ice sheets, like the glaciers on Greenland, it is possible to reconstruct this climate history 100,000 years into the past.

The ocean has similar archives of past climate. By taking cores from the ocean floor, it is possible to reconstruct the history of ocean climate back many thousands of years. We have used our ships to collect samples of sediments from the seafloor. Preserved in the sediments are the fossil remains of microscopic organisms that settle to the seafloor. They accumulate over time in layers (in a similar way to ice core layers) that delineate many important aspects of past climate. For instance, certain organisms are found only in colder, polar waters and never live in warmer waters. They can reveal where and when cold surface waters existed—and didn't exist—in the past.

From records like these, we know that about 12,800 years ago North Atlantic waters cooled dramatically—and so did the North Atlantic region. This large cooling in Earth's climate occurred in about a decade—and the cold spell lasted for about 1,300 years.

This period is called the Younger Dryas, and it is just one of several periods when Earth's climate changed very rapidly from warm to cold conditions, and then back to warm again. So these long-term cold snaps are not unusual.

These shifts almost certainly involved changes in the ocean's circulation. There were shutdowns and restartings of the Great Ocean Conveyor. These warm-to-cold transitions happened in about 3 to 10 years. The cold periods lasted for 500 to 1,000 years. Such oscillations in temperature and ocean circulation have occurred on a regular basis.

About 1,000 years ago, during a period of unusually warm temperatures in the North Atlantic, the Norse established settlements and vineyards in Greenland that would not be possible today. Those settlements were abandoned about 500 years ago when, we believe, the most recent shutdown of the North Atlantic Ocean circulation system occurred. During that era, called the Little Ice Age, northern Europe was much colder than it is today. Glaciers spread outward and downward in the Alps. Winters, on average, were more severe. Farming was affected. Famine was frequent.

In the 1730s and 1740s, abrupt European cooling caused famine across western Europe, especially in Ireland and France, where farmers depended on wheat and potatoes. In Ireland, this is known as the "forgotten famine". As many people died during the forgotten famine as died during the famed potato famine of the 1840s.

The 16th-century Flemish artist Bruegel couldn't have painted his famous frozen landscapes today, because canals in The Netherlands rarely freeze now, as they regularly did back then. And likewise, the winter in Valley Forge might not have been so cold, and Washington's crossing of the ice-bound Delaware River wouldn't have been so dramatic if he had done it a century later—because climate conditions have shifted since then, and today the Delaware River rarely freezes.

If you've read David McCullough's biography of John Adams, you will remember that the British were about to set Boston on fire when George Washington was able to bring the cannon of Fort Ticonderoga down from upstate New York in record time. He was able to do it because the ground was frozen solid and they could slide the cannon to the Dorchester Hills of Boston in time to persuade the British to retreat from Boston and thus change the course of history.

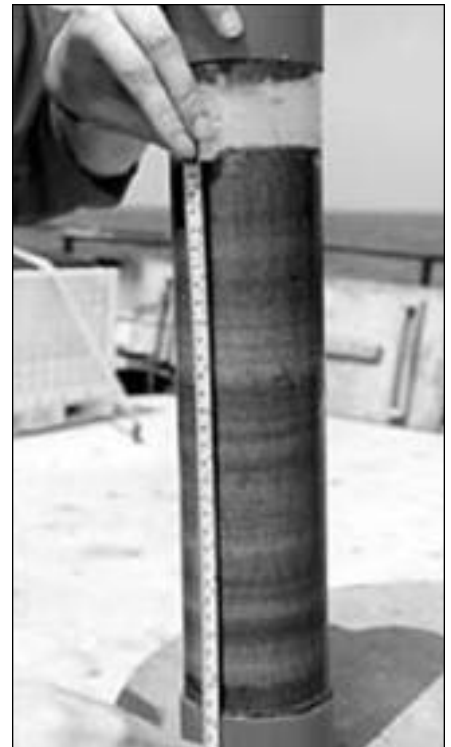
So we have solid evidence that the Great Ocean Conveyor has slowed down or shut down in the past. And we have seen dire impacts on our climate. It begs the question: could something throw a wrench into the Great Ocean Conveyor in the near future? And could that trigger abrupt, dramatic climate changes throughout our planet? The answers to these questions: indisputably "Yes" and "Yes".

TIPPING THE BALANCE

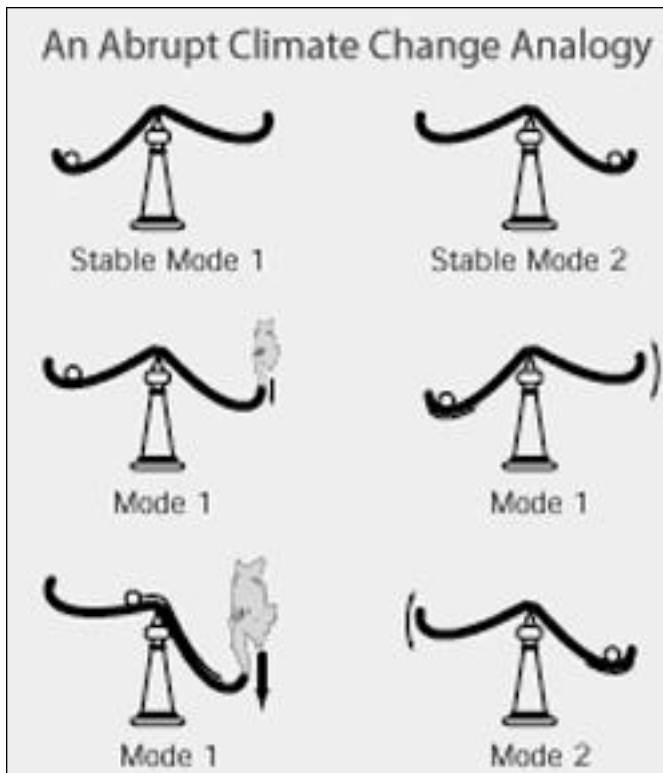
Another way to look at Earth's climate system is as a simple mode of balances (see diagram). Like most dynamic systems, Earth's climate seeks a stable mode. And it will tend to stay in that mode if nothing causes it to change. That's the top tier of the diagram. The ball remains ensconced in its cup.

The middle tier shows what happens if you push on the system. The ball will rattle and roll around in different directions

About 1,000 years ago, during a period of unusually warm temperatures in the North Atlantic, the Norse established settlements and vineyards in Greenland that would not be possible today.

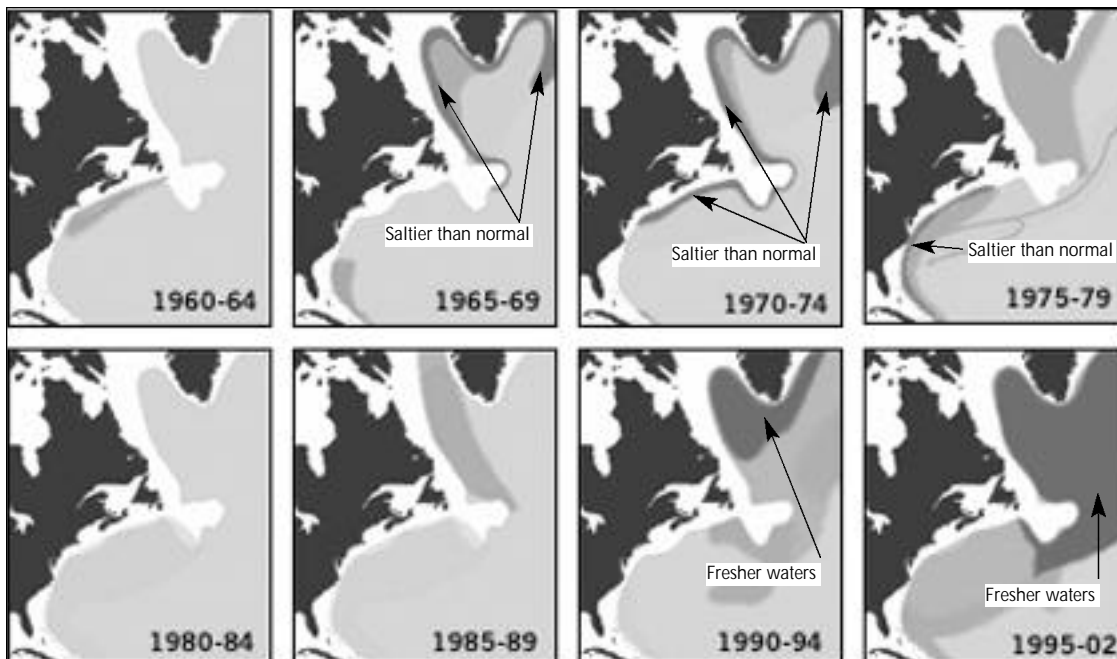


Cores of seafloor sediments reveal the climate history of the ocean. (Photo by Ken Buesseler, Woods Hole Oceanographic Institution)



Like most dynamic systems, Earth's climate seeks a stable mode (top tier). If the system is pushed, it will stagger for a while until it recovers (middle tier). If it is pushed past a threshold, it will shift into another mode of operation (bottom tier). (Illustration by Jack Cook, WHOI, adapted from *Abrupt Climate Change: Inevitable Surprises*, National Research Council.)

for a while until it settles back down in its cup. We humans would definitely notice that rattling until the climate system returned to equilibrium. The balance, forced to move, staggers but recovers.



New data show that North Atlantic waters at depths between 1,000 and 4,000 metres are becoming dramatically less salty, especially in the last decade. Red indicates saltier-than-normal waters. Blue indicates fresher waters. Oceanographers say we may be approaching a threshold that would shut down the Great Ocean Conveyor and cause abrupt climate changes. (Data from: Ruth Curry, WHOI; Bob Dickson, Centre for Environment, Fisheries and Aquaculture Science; and Igor Yashayaev, Bedford Institute of Oceanography)

Then there is a third situation, in which a strong enough push at the right time could shove the system past a threshold and into a completely different mode of operation. In terms of our climate system, that means that a small or temporary forcing could produce a sudden, large and long-lasting change. That begs the next question: what could do that to our climate system today?

One answer to that is fresh water. If you simply add too much fresh water to the North Atlantic, the waters there will become less salty and less dense. They will stop sinking. Then the Gulf Stream will slow down or be deflected southward. Winters in the North Atlantic region will get significantly colder.

THE FRESHENING OF THE NORTH ATLANTIC

Now here's the predicament. In the past year, oceanographers monitoring and analysing water conditions in the North Atlantic have concluded that the North Atlantic has been freshening dramatically—especially in the past decade. New data—from Ruth Curry at Woods Hole Oceanographic Institution and her colleague Robert Dickson at the British Centre for Environment, Fisheries and Aquaculture Science—chronicles salinity changes in the western North Atlantic since 1960.

The Great Ocean Conveyor transports fresh surface water down into the depths. The depths can absorb a lot of fresh water like a sponge. But since 1970, the equivalent of an extra 20 feet of fresh water across the surface of the northern North Atlantic has been transported down into the ocean depths, most of that since 1990.

A sponge that is three-quarters saturated can still absorb more water. But the moment that sponge is fully saturated, it can absorb no more water. At some point, the North Atlantic will no longer absorb any more fresh water. It will begin to pile up on the surface. When that happens, the Great Ocean Conveyor will be clogged. It will back up and cease functioning.

The very recent freshening signal in the North Atlantic is arguably the biggest and most dramatic change in ocean property that has ever been measured in the global ocean.

Already, surface waters in the Greenland Sea are sinking at a rate 20 per cent slower than in the 1970s.

At what percentage will the Ocean Conveyor stop: 25 per cent...40 per cent...60 per cent? This is not like a dimmer switch, but more like a light switch. It probably goes from "on" to "off".

We can't yet determine the precise source or sources of this additional fresh water. Global warming may be melting glaciers or Arctic sea ice. In recent

decades, the volume of Arctic sea ice has decreased by 40 per cent. And if North Atlantic sinking slows down, less salty Gulf Stream waters flow northward—which exacerbates the situation.

In February 2002, at a worldwide meeting of oceanographers, new data on North Atlantic freshening prompted many scientists to say that salinity levels in the North Atlantic are approaching a density very close to the critical point at which the waters will stop sinking.

One of my colleagues at Woods Hole, Terry Joyce, put it this way: "I'm in the dark as to how close to an edge or transition to a new ocean and climate regime we might be," he said. "But I know which way we are walking. We are walking toward the cliff."

To that sentiment, I would add this: we are walking toward the edge of a cliff—*blindfolded*.

FACING UP TO ABRUPT CLIMATE CHANGE

Our ability to understand the potential for future abrupt changes in climate is limited by our lack of understanding of the processes that control them.

In the past decades, we have made great strides in understanding Earth's atmospheric circulation system because we established a global network of thousands of meteorological stations to monitor changing atmospheric conditions. No observational network exists to monitor the oceans continuously. If we just had a few more strategically placed modern instruments in the oceans for an extended time, we could understand so much more about how the oceans can cause abrupt climate changes.

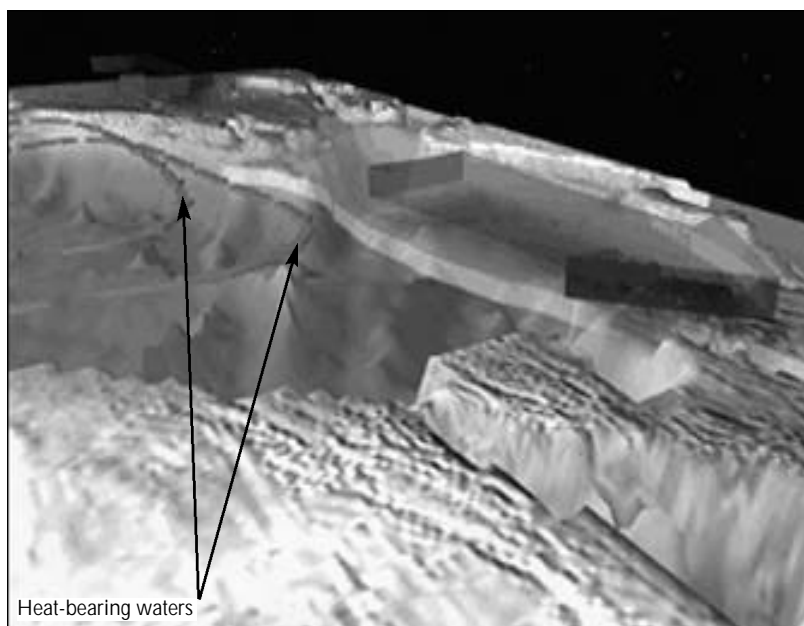
At present, there is no national plan for improving our understanding of the issue, and, according to a 2002 National Research Council report, no policymaking body is addressing the many concerns raised by the potential for abrupt climate change.

So here's the situation. We have unequivocal evidence of repeated, large, widespread, abrupt climate changes on Earth. It is reasonable to assume that greenhouse warming can exacerbate the possibility of precipitating large, abrupt and regional or global climatic changes. We even have strong evidence that we may be approaching a dangerous threshold—that we are squeezing a trigger in the North Atlantic.

We could downplay the relevance of past abrupt events and deny the likelihood of future abrupt climate changes. But that could prove costly. With growing globalisation, the adverse impacts of climate changes are likely to spill across national boundaries—through migration, economic shocks and political aftershocks.

Over human history, one of the major ways that humans have adapted to changing environmental and economic fortunes has been to migrate from unproductive or impacted regions to more productive and hospitable regions. But today, the world's population has grown too large. There is less usable, unpopulated territory to absorb migrants.

National borders are less open, so it is difficult for people to move to other countries when droughts, floods, famines and wars occur. These boundary effects could be particularly severe for small and poor



If too much fresh water enters the North Atlantic, its waters could stop sinking. The Great Conveyor would cease. Heat-bearing Gulf Stream waters (red arrows) would no longer flow into the North Atlantic, and winters would become more severe. (Illustration by Jack Cook, WHOI; see WHOI website for animation.)

countries, whose populations are often unwelcome in richer countries. In the 1840s, more than one million Irish people emigrated because of the potato blight. Can you imagine an equivalent migration of many millions of people today? Keep in mind that there were only about one billion people on Earth then. There are six billion now.

I believe that as a society we must face the potential for abrupt climate change. Perhaps we can mitigate the changes. If not, at least we can still take steps to adapt to them.

The best way to improve the effectiveness of our response is to have more knowledge of what can happen—and how and when it can happen. Research into the causes, patterns, likelihood and effects of abrupt climate change can help reduce our vulnerabilities and increase our ability to adapt.

If climate changes come abruptly, we will have less time to adjust. In other words, the more knowledge we have, the more reliably we can predict changes and the better our chances.

Maybe over the edge of the cliff there's just a three-inch drop. Or maybe there's a big, fluffy bed full of pillows. My worry is that we are indeed approaching this cliff blindfolded.

Are you comfortable and secure with this scenario?

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THE MEDICAL ASSAULT ON YOUNG WOMEN

Whether to control painful periods or even acne, young women are increasingly being prescribed the contraceptive Pill and antidepressant drugs, despite the cost to their long-term hormonal and mental health.

by Sherrill Sellman © 2002

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The Berlin Wall of hormone replacement therapy came tumbling down in July 2002 when the most prestigious study ever conducted on HRT found that the steroidal hormones, oestrogen and synthetic progestins caused breast cancer, strokes and blood clots. It's been a downhill slide for HRT (and drug profits) ever since.

The real lesson from that study is that, for 40 years, menopausal women were in fact the uninformed guinea pigs trialling dangerous hormonal drugs that made an unprecedented fortune for drug manufacturers. The world was shocked with the findings from the study, and millions of angry women defected from the HRT ranks.

Women and many doctors had been cleverly convinced that menopause was an *endocrinopathy*—an oestrogen deficiency disease. Women were further advised that they must be saved from nature's inherent design fault—the total decline and disintegration of their hormonal health as well as their faculties—with toxic, untested steroid hormones.

The folly of medicalising menopausal women has at last been revealed. Unfortunately, the use of untested and dangerous steroidal hormones and other drugs still continues. This time, however, the medical fraternity and pharmaceutical corporations have set their sights on young women.

Medicalising our Daughters

Being a teenage girl is challenging at the best of times. These days, it seems to be even tougher for both teenagers and their parents. Peer and social pressures, economic concerns, health problems, school work and family tensions all tilt the stress barometer into the dangerous red zone. Skipping meals, eating junk food and going on starvation diets is a way of life for teenagers these days. More than ever, teenagers seem to be burning the candle at both ends.

The behaviours and decisions that young women make directly affect their physical and emotional well-being for the short and long term. As a result, their hormonal health is under siege. Premenstrual syndrome (PMS), painful periods, irregular or absent periods, ovarian cysts, polycystic ovaries, fibrocystic breast disease (lumpy, painful breasts), endometriosis, hormonal migraines, acne, allergies, fatigue and mood swings are occurring in young women at epidemic rates. Many girls try to ignore their health problems, hoping they will disappear. Others schedule an appointment with their doctors. Odds on, they will leave the office with either a prescription for a drug or some variation of the Pill.

Modern science, rather than perceiving hormonal imbalances as aberrations created by the many abuses of modern-day living, has convinced women that the underlying problem is menstruation itself, and that natural reproductive cycles are dangerous and disease-producing and must be medicated. Women are also told that their reproductive system has become the enemy and is the primary cause for all their physical problems and emotional turmoil. The solution: shut it down. The method: steroidal hormones.

A long history predates this particular perspective. The venerable Greek fathers of medicine held similar views. Hippocrates posed the question, "What is woman?", and then supplied the answer: "Disease!" He also argued that fermentation in the blood precipitated menstruation, because women lacked the "male ability to dissipate the impurities in the blood gently and sweetly through perspiration". To his way of thinking, menstrual blood had a "noisome smell". Galen, another famous Greek philosopher, believed that menstrual blood was the residue of blood in food, which women, having inferior bodies, were unable to digest.¹

The notion that menstruation is a rather unpleasant, if not downright toxic, process has been around for a very long time. So has the belief that the source of all women's suffering resides with her ovaries, uterus and menstrual flow. The science of medicine is notoriously misogynist.

While it would be comforting to think that living in the 21st century guaranteed a more enlightened appreciation of women's physiology, it would appear that we may have to wait another century or two for that momentous event finally to occur. When it comes to understanding and appreciating the wonders of the female physiology, modern medicine is moving at a galloping snail's pace.

A recent syndicated column by a highly respected Australian medical doctor was titled "Period Disease". A question from a reader was posed to him: "My doctor told me recently that monthly periods are now regarded by some as a 'disease' and totally preventable. Is this true?" His sagacious reply: "Why should women be burdened with loss of valuable blood each month, which is often not manufactured in similar amounts, often leading to anaemia and chronic tiredness? Taking the active ingredients of the oral contraceptive pill daily, with no seven-day break, solves the problems." The short answer to that question of whether monthly periods are a disease was a whole-hearted "Yes".²

The sentiment that periods are a disease—or at least a most unwelcome, unproven and unsafe physiological process—seems to reflect a growing trend amongst members of the medical profession. They promote new scientific developments that can supposedly liberate women from their age-long debilitation, menstruation.

Leading the charge to stamp out menstruation is the work of Dr Elsimar Coutinho, Professor of Gynaecology, Obstetrics and Human Reproduction at the Universidade Federal da Bahia in Brazil, as recounted in his book, *Is Menstruation Obsolete?*³

Dr Coutinho argues that regular monthly bleeding is not the "natural" state of women and that it actually places them at risk of several medical conditions of varying severity. The author maintains that while menstruation may be culturally significant, it is not medically meaningful. He asserts that prehistoric women had fewer than 160 periods in their lifetime. (The mind boggles at how rigorous the scientific method actually was in the conduct of that research.) On the other hand, modern women, who start menstruating earlier and spend less time pregnant, have more than 400 menstrual cycles. As the champion of women's freedom, he believes that 21st century women should be able to choose the timing and frequency of their periods, just as they can now choose the timing and frequency of childbirth. From a medical point of view he sees menstruation as a failed process, having no beneficial effects; indeed, it can even be harmful to many women's health.

In a nutshell, Dr Coutinho's work suggests that the most medically advanced "treatment" for menstruation would be its total cessation in all women of reproductive age. The correct medical terminology is *chemical castration*.

The intricate and profoundly complicated female reproductive system, which has undergone many hundreds of thousands of years of evolutionary fine-tuning, has now been declared obsolete. Like a top-class magician, medical science now professes

the rationale and the means to make menstruation disappear completely! The solution is simple: just give all women a continuous low-dose birth control pill. What progress!

Dr Coutinho's theory has many physicians and researchers waxing lyrical, agreeing that there's no reason why women can't opt for fewer periods by extending the use of the Pill. Whether for easing health problems such as migraines or eliminating the inconvenience and messiness not to mention the expense of menstruation, the Pill can now be taken continuously for 84 days followed by a seven-day break. In this manner, women will only have a bleed four times a year.

Dr Freedolph Anderson, lead researcher of the trials for the new continuous contraceptive pill Seasonale, which will make its debut in 2004, says: "We have more than 30 years' experience of prolonged period suppression with [intravenous contraceptive] Depo-Provera; we know there are no health deficits and that women don't develop gynaecological problems from not menstruating."⁴

Dr John Eden, Associate Professor of Reproductive Endocrinology at the University of New South Wales in Sydney, Australia, reiterates that point of view: "Women are often healthier if they are on the Pill..."⁵

So, now that medicine has conquered menstruation and drug companies' glossy marketing campaigns have succeeded in

extolling the Pill's ever growing virtuosity, what has actually been achieved for all the young women who are being seduced by these promises? Are women really healthier on the Pill? Has prolonged period suppression with Depo-Provera been perfectly safe over those 30-plus years? Is this really a great victory, or a catastrophe of unparalleled proportions for modern women?

Shocking Facts about the Pill

Since 1960, when the US Food and Drug Administration approved it

for contraception, the Pill has been one of the most popular methods of preventing pregnancy. But in recent years, reminiscent of the off-label uses of HRT, oral contraceptives have increasingly been prescribed for adolescent girls and young women for noncontraceptive purposes.

There is no doubt that doctors consider the Pill the best solution to address a long list of young women's hormonal difficulties. This day and age, there's a plethora of options: the combined low-dose Pill made with oestrogen and progestin; the progestin-only mini-Pill; and the three-year implant or injection.

Far beyond its initial purpose as a contraceptive drug for short-term use, the Pill has become the darling of the medical world for treating just about any hormonal problem a girl may have, and then some. To date, the Pill is prescribed to help teenagers attack acne, "regulate" their periods, eliminate painful periods and treat PMS, endometriosis, migraines, ovarian cysts and polycystic ovaries. Girls as young as thirteen are now prescribed the Pill for treating acne.

The Pill has been touted by the medical profession as one of the most effective and powerful preventive medicines around. But is it?

In December 2002, the US federal government published the 10th edition of its biennial "Report on Carcinogens", which is mandated by Congress as a way for the government to help keep the public informed about substances or exposures that are known to cause human cancers. Added to the list of "known"

Girls as young as thirteen are now prescribed the Pill for treating acne.

human carcinogens were all steroidal oestrogens used in oestrogen replacement therapy and oral contraceptives.⁶ The gravity of this finding cannot be overstated: *all* oestrogens have now been proven, unequivocally, to cause cancer!

To make matters even worse, norethisterone, the most common progestin in progestin–oestrogen combination oral contraceptives, and other synthetic progestins used for injections and implants were listed as known human carcinogens by the National Institute of Environmental Health Sciences back in 1997.⁷

Is it arrogance or just plain ignorance to believe that "Women are often healthier if they are on the Pill"? The fact is that the ingredients of the Pill, whatever its formulation, are known human carcinogens. How can any carcinogenic drug be deemed to be health promoting? What cancers do these hormones cause? Studies have linked oestrogens and progestins to breast, ovarian, endometrial, cervical, skin, brain and lung cancers.

It is now recognised that, far from being safe and risk free, these steroid hormones are, in reality, dangerous and potentially life-threatening drugs that cause grave harm to women. Most women taking the contraceptive pill have little idea about what dangerous ingredients they are actually putting into their bodies, nor are they knowledgeable about the potential side effects.

Pathologising Menstruation

The Pill literally stops natural menstruation. Bleeding only occurs each month because the synthetic hormones are not taken for seven days of the cycle, which causes a shedding of the uterine lining. The bleeding that occurs would be more accurately termed *withdrawal bleeding*, not menstruation. In fact, there is nothing natural about taking the Pill. The action of the Pill is in fact a female form of "castration" because it stops the natural reproductive cycle. Sometimes a woman's ovaries will become permanently damaged, resulting in infertility.⁸

Fabio Bertarelli, a Swiss billionaire who owns Serono Laboratories, manufacturer of 70% of the world's fertility drugs, has attested to this fact. He told the *Wall Street Journal* in 1993: "Our usual customers are women over 30 who have been taking birth control pills since they were teenagers or in their early 20s."

Business is booming for the fertility business. The data from the journal *Fertility and Sterility* suggest that 6.2 million women in the US had fertility problems in 1995, compared to 4.5 million in 1982 and 4.9 million in 1988, and this number could be as high as 7.7 million women in 2025.⁹

All contraception formulas may increase the risk of coronary artery disease, breast cancer, cervical cancer, skin cancer, immune dysfunction, liver toxicity, stroke, blood clot, osteoporosis, gum disease, high blood pressure and ectopic pregnancy. The side-effects include nausea, vomiting, migraine-type headache, breast tenderness, allergies, weight increase, changes in sex drive, depression, head hair loss, facial hair growth and increased incidence of vaginitis. Also, women with a history of epilepsy, migraine, asthma or heart disease may find that their symptoms worsen. Many of these effects may persist long after discontinuation of the Pill.

Pill-users have an increased risk of two painful types of inflammatory bowel disease: ulcerative colitis and Crohn's

disease. In addition, the Pill causes serious nutritional deficiencies of vitamin B1, B2, B6, folic acid, B12, vitamins C, E, K, zinc, selenium, magnesium and the amino acid tyrosine, which is essential for proper thyroid function. Oestrogen increases copper levels, which causes depression.¹⁰

Even more alarming is the fact that the earlier a woman uses the Pill, the greater her risk of developing breast cancer and also having a worse prognosis. One disturbing study showed that the Pill caused chromosomal aberrations in the breast tissue of young female users. This research was further backed up with a study showing that there was a 100% increased risk of breast cancer which extended from 10 years of Pill use down to just three months of use! So, it is of no surprise that women as young as 17 and 19 years old are now being diagnosed with breast cancer.¹¹

The breast tissue of young teenage girls is still developing and is particularly sensitive to the over-stimulation from synthetic oestrogen. In one landmark study, researchers found that women who took the Pill before the age of 20 and were later diagnosed with breast cancer had tumours with worse prognoses than did breast cancer patients who started taking the Pill at a later age or had not previously taken it.¹² Another study found this most terrifying result: the younger the women were at the time of breast cancer diagnosis, the greater the possibility that they would be dead within five years.¹³

Progestins make their own mischief. As well as being carcinogenic, they raise "bad" cholesterol and blood pressure, distort sugar metabolism, compromise the immune system and create undesirable masculinising effects. So it is no wonder that Depo-Provera should be of great concern to women. It was reported that women who used it before the age of 25 increased their relative risk of breast cancer by 50%, and that women who used it

for six or more years raised their risk significantly to 320%. (Dr Coutinho, the enthusiastic advocate for the elimination of menstrual cycles using the continuous low dose Pill, was the developer of Depo-Provera.) Of further concern are studies showing that both oral contraceptives and Depo-Provera contribute to bone loss in adolescents.^{14, 15}

Needless to say, the pathologising of women's menstrual cycles and hormonal imbalances through the pervasive and persuasive advertising campaigns initiated by both the medical profession and pharmaceutical industries is seriously jeopardising the physical and emotional wellbeing of young women.

Many parents have been convinced that the Pill was the solution to their daughter's period pains, acne, endometriosis or ovarian cysts, but the fact is that this carcinogenic treatment will only further compromise the health of teenage girls.

What has been seriously overlooked is the fact that hormone replacement therapy and birth control pills are formulated with the same ingredients: oestrogens and progestins. The main difference? The Pill has higher amounts of these physiologically altering, carcinogenic, toxic drugs.

With the arrival of the continuous low dose Pill, normal menstrual cycles are now fair game for drug treatment. This has great appeal to young women, who have been brainwashed into believing that menstrual cycles are indeed a curse, not to mention a damned inconvenience. Nutritionally depleted diets, stress and environmental toxins—the real culprits of menstrual

The action of the Pill is in fact a female form of "castration" because it stops the natural reproductive cycle.

irregularities and hormonal imbalances—have been all but ignored by doctors. Why not just use a quick fix to shut the whole system down? Take a pill! Haven't we been here before?

Reminiscent of recent HRT revelations, the mass prescribing of the continuous low dose Pill—without any long-term studies undertaken—amounts to a dangerous experiment being conducted on young women. However, it would be pointless to spend millions of dollars on such a study, since there already exists overwhelming evidence of how seriously the Pill compromises the health of young women.

Inventing a New Disorder

Unfortunately, it's not only the obsolescence of menstrual cycles that the drug companies have on their agenda. There is another way that young women are being pathologised and medicalised for their natural cycles.

The pharmaceutical giant Eli Lilly is promoting its new drug, Sarafem, as a miracle pill for women suffering with a new "mental disorder" called *premenstrual dysphoric disorder* (PMDD).

Never heard of it? It's no surprise, since it was only concocted as a psychiatric disorder about three years ago.

PMDD, this "mental disorder" which the American Psychiatric Association (APA) has not yet accepted as an official mental disorder, is nonetheless listed in the appendix of the APA's *Diagnostic and Statistical Manual of Mental Disorders*—the DSM-IV, the bible of mental diseases.

PMDD is actually the new and improved version of premenstrual syndrome (PMS), which is purported to affect 3–10% of all menstruating women. The fact that PMDD is listed only in the diagnostic manual's appendix reflects the APA's desire for further research before

accepting it as a fully fledged mental disorder. Nonetheless, it is being treated vigorously.

To be diagnosed with PMDD, a woman must experience five or more symptoms. This unofficial mental disorder is said to be characterised by the following symptoms: depressed mood; anxiety; decreased interest in activities; feeling sad, hopeless, self-deprecating, tense, anxious or "on edge"; persistent irritability; anger; increased interpersonal conflicts; feeling fatigued, lethargic or lacking in energy; marked changes in appetite; a subjective feeling of being overwhelmed or out of control; and physical symptoms such as breast tenderness, swelling or bloating. Before the PMDD diagnosis can be given, a woman is advised to chart her symptoms for two months.

Lilly reports in its advertising that, now, "Doctors can treat PMDD with a pretty pink-and-lavender pill called Sarafem—the first and only prescription medication for PMDD". The ad further states that "Sarafem contains fluoxetine hydrochloride, the same active ingredient found in Prozac".¹⁶

Actually, Sarafem is the Selective Serotonin Reuptake Inhibitor (SSRI) known as Prozac. Eli Lilly admits that Sarafem has the same active ingredient as Prozac, complete with the same dangerous side effects. It's been dressed up in a pretty pink-and-lavender capsule, and the price has been increased. It is now masquerading as a bona fide PMDD drug.

It is no coincidence that the year that Sarafem was listed as the only approved drug for this new female "mental disorder", it

just so happened to coincide with the year that the patent on Prozac ran out. Without a patent on Prozac, Eli Lilly lost exclusive rights to the drug, along with hundreds of millions of dollars in profits. However, with the acceptance of the Prozac clone Sarafem as the only approved treatment for PMDD, Lilly's patent on Prozac in effect was extended by another seven years.

According to documents posted on the FDA's website, Lilly has proposed a "pilot study of PMDD in adolescents to estimate its response to treatment with fluoxetine".

So, who wins? The OB-GYNs, whom Eli Lilly is exclusively targeting as prescribers—and, of course, Eli Lilly. Who loses? Young women.

And now, two other drugs have recently been approved to treat PMDD. They are the antidepressant drugs Zoloft and Paxil. With these two additional players in the PMDD market, expect to see many more TV and magazine ads aggressively educating the public about "this serious new condition".

Women, once again, are being manipulated, misinformed and mistreated in order to fill the drug companies' coffers. But there is an even more draconian side to this.

A Strong Warning about Prozac, Paxil and Zoloft

Researchers at the Division of Preventive Oncology in

Toronto, Canada, reported the promotion of malignant growth in rodents given antidepressant drugs at clinically relevant doses. These drugs bind to growth-regulating receptors inside cells associated with anti-oestrogen binding sites. When they were given to rats primed with a known carcinogen, the animals developed breast tumours in a shortened time. Compared to controls, the tumour frequency was increased greater than twofold in the rats given the antidepressants.¹⁷

The Canadian research team also found that women who took Paxil saw their risk of breast cancer increase sevenfold!¹⁸

Further studies have shown that Prozac not only promotes tumours but also causes proliferation of malignant cells by blocking the body's innate ability to kill tumour cells. There is mounting evidence that these drugs can cause breast cancer and other forms of cancer such as brain cancer.¹⁹

Allan Steingart, an Assistant Professor of Psychiatry at the University of Toronto, has also sent out another warning: SSRIs are endocrine disruptors that can alter oestrogen levels. Side effects include changes in breast density, lactation in women who are not pregnant, and sexual dysfunction.²⁰

There are also ominous long-term side effects associated with these medications. According to Dr Joseph Glennullen, a psychiatrist who works for Harvard University Health Services and is the author of *Prozac Backlash*, they include: neurological disorders such as disfiguring facial and whole-body tics that can indicate brain damage; sexual dysfunction in up to 60% of users; debilitating withdrawal symptoms including visual hallucinations; electric shock-like sensations in the brain; and dizziness, nausea and anxiety.²¹

The SSRIs—Prozac, Zoloft, Paxil—possess another trait: they have the ability to turn normal people into raging suicidal murderers. Three years before Prozac received FDA approval

Prozac, Zoloft and Paxil possess another trait: they have the ability to turn normal people into raging suicidal murderers.

Continued on page 74

THE BITTERSWEET STORY OF THE STEVIA HERB

The sweet stevia herb has had a long, safe history of use as a food and medicine in South America and Asia, but in many Western countries it is illegal as a food or food additive but legal as a dietary supplement.

by Jenny Hawke © 2002

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History and Chemistry

It's easy to grow, wonderful as a sweetener, contains medicinal properties, is non-caloric, safe to cook with, and has great potential in agriculture. It's widely used in South America and Asia. So why isn't stevia a household name in the rest of the world?

Stevia rebaudiana Bertoni is a herb native to Paraguay. It is also known as "honey yerba" and "honeyleaf" and by other variations of these names. The mature plant stands from around 65 centimetres (26 inches) to as tall as 180 cm (72 in) when cultivated or growing naturally in fertile soil. Historical records show that the leaves have been used for hundreds of years by the Guarani Indians, who named the plant *caá-êhê*. The main use was as a sweetener, particularly in their green tea, known as *maté*. It was also used in medicine or as a snack. Stevia's leaf is estimated to be 150 to 300 times sweeter than refined sugar.

M. S. Bertoni, in the late 1800s, was the first European to document stevia. In 1931, French chemists extracted stevioside from the herb in the form of an intensely sweet, white crystalline compound. The herb was then considered for use as a sweetener during the food shortages experienced by Britain during World War II. However, interest waned when sugar again became available.

Since this time, stevia has been used extensively in many Asian and South American countries, but the USA, Canada, Australia and Europe have not embraced the herb as a sweetener, opting either for sugar from readily available sugar cane or sugar beet, or for aspartame-based and other artificial sweeteners as a sugar substitute.

More than 150 varieties of stevia exist, but *Stevia rebaudiana Bertoni* is the only sweet stevia plant. Carbohydrate-based compounds from the stevia leaf can be isolated to glycosides known as *steviosides*. Stevioside is a glycoside of the diterpene derivative *steviol*, and is a natural component of the plant. Stevioside is intensely sweet and is present at levels up to 13% in the leaves of *Stevia rebaudiana Bertoni*. Rebaudiosides and dulcosides are other sweet chemical constituents of the plant that can be extracted.

Stevia, the FDA and Big Business

In the USA, stevia does not have "Generally Recognized As Safe" (GRAS) status for consumption, and is therefore "prohibited from use in human food" under the Dietary Supplement Health and Education Act (DSHEA) of 1994. According to the Act, any food or drink containing stevia is an "adulterated" substance. However, while stevia may not be sold as a sweetener, it may be legally purchased and taken internally. In amongst all the contradiction and confusion, this means that stevia is available for human consumption—but only when classified as a dietary supplement or herb.

It has been suggested that stevia has not been granted GRAS status in the interests of Big Business. In the late 1980s, a trade complaint was registered with the FDA, as tea containing stevioside was being sold by Celestial Seasonings. The Stevia.net website has a copy of an FDA memorandum concerning the incident; it was obtained through the Freedom of Information Act, and complainant names (company name and legal representatives) were deleted by the FDA to protect the informant's identity.

In 1991, stevia was deemed unsafe and was banned from the USA completely. It was only legalised as a dietary supplement due to the changing of law with the introduction of the DSHEA.

According to a 1994 article by Rob McCaleb of the Herb Research Foundation, the FDA began visiting businesses selling stevia around 1987, saying it was an unapproved food additive. One FDA inspector reportedly told a company president that the manufacturer of NutraSweet® had made complaints to the FDA to try to stop the use of stevia.

After the 1991 Import Alert banning the importation of stevia into the USA, the Herb Research Foundation produced a review by Doug Kinghorn, PhD, on behalf of the American Herbal Products Association (AHPA). The peer-reviewed work concluded that stevia was safe, based on scientific evidence and historical use. The AHPA then filed a petition with the FDA to have stevia leaf exempted from food additive regulations. However, the FDA concluded that there was insufficient evidence to prove stevia's safety. McCaleb asserts that evidence required to establish stevia as a food is far more comprehensive than that required for artificial sweeteners such as aspartame.

Julian Whitaker, MD, believes that the FDA "has been after stevia since 1986, coincidental with the growing popularity of aspartame".

GD Searle and Company developed aspartame (now commonly marketed as NutraSweet®) by accident when creating an ulcer drug. Many health complaints have been reported about the negative health effects of aspartame, from headaches to tumours.

According to James S. Turner, lawyer and co-founder of the Aspartame Consumer Safety Network, Searle funded 100% of the safety studies undertaken from 1985 to 1995 which found aspartame to be safe. Apparently all studies not funded by industry raised questions. Information linking tumours to aspartame was dismissed by the then FDA Deputy Commissioner, who went on to become Vice President of Clinical Research for Searle.

According to another report by health author Gail Davis, a similar situation occurred in 1983 when aspartame was approved for use in soft drinks. The FDA Commissioner left soon afterwards to become a consultant for Searle's public relations firm.

GD Searle was bought by Monsanto in 1985 and then acquired in 2000 by J.W. Childs Equity Partners II LP. The company asserts that more than 200 objective studies have found NutraSweet to be safe and that these papers were reviewed by relevant regulatory authorities such as the FDA, etc. Neotame is the new sweetener to be marketed by the company. It is 40 times sweeter than NutraSweet and 8,000 times sweeter than sugar. [For more on aspartame, see feature articles in NEXUS 2/28, 3/01, 7/04 and 7/05.]

Stevia's Safe Historical Use

Many foods have not had to go through the process of being approved for GRAS status. Through historical use, it is assumed they are safe for human consumption. Supporters of stevia have put this argument forward to the FDA, but without success.

Stevia.net contends that Celestial Seasonings was permitted to use stevia because the herb has had a long history of common use without adverse health effects. Furthermore, the 1991 Import Alert acknowledges stevia's use throughout history and is therefore an admission of its qualification as having GRAS status.

The American Herbal Products Association maintains that stevia is a food, as it has had a long history of food use, hence it should fall into the safe category.

Sunrider Corporation also tried this tack in 1995, stating that stevia was a "grandfathered" or "old" dietary ingredient, as it had been contained in their products before the DSHEA of 1994. However, this approach became problematic because the company had signed a consent decree in 1984 not to sell stevia, as "Sunrider decided it was not financially prudent to judicially contest this matter".

In 1998, the Stevita Company and the US FDA received considerable media attention after it was reported that the FDA had ordered the burning of books sold by Stevita.

The Stevita Book-burning Saga

In 1998, the Stevita Company and the US FDA received considerable media attention after it was reported that the FDA had ordered the burning of books sold by Stevita. These contained information on the herb along with stevia recipes.

The refuseandresist.org website reported in July 1998 that Stevita had endeavoured to import stevia in 1987 as "Stevia Sweet", but the FDA ordered the labels changed so as not to imply the substance would be used as a sweetener. Later on that year, FDA agents visited the company's warehouse and took copies of three books sold on stevia.

FDA Dallas then detained a shipment of stevia at customs in February 1998, the reason later given that the shipment was contaminated because of the previously released literature. A March 6 letter regarding this matter reportedly stated that the literature "rendered the product adulterated".

The FDA took inventory at Stevita in April and May 1998, and Oscar Rodes agreed not to sell the books, as the hold-up was affecting business. "We had already been forced to let employees go...we have to eat," he

said in the report. The FDA then arranged to come and take inventory, and stated in a fax that an investigator would "be available to witness the destruction of the cookbooks, literature and other publications". Rodes then notified the FDA agents on arrival that he would *not* destroy the books, but would videotape any actions by the FDA to do so.

Dr Julian Whitaker became involved when he had his attorney prepare a lawsuit to prevent destruction of the books. In his article on the subject, Whitaker makes a point about the power of the FDA by quoting from Tulane University professor James P. Carter's 1992 book, *Racketeering in Medicine: The Suppression of Alternatives*. Carter states: "The FDA serves as the pharmaceutical industry's watchdog, which can be called upon to attack and destroy a potential competitor under the guise of protecting the public."

The Aspartame Consumer Safety Network reported that in June 1998, James Kirkland—author of one of the banned books—attended a congressman's public meeting at which he

displayed two books. One, written by himself, was on cooking with stevia, and the other book gave information on constructing home-made bombs. He held up the books and asked the rhetorical question, "Which of these publications is legal?"

Whitaker contends that Patricia and Oscar Rodes of Stevita were given poor legal advice, which led to their agreeing to stop selling their books. He says that James Lahar from the FDA mandated a book-burning when he and other agents confiscated the company's stevia, pressuring Stevita not to sell the books. Oscar Rodes called his local television station to attract public attention to his company's plight. FDA officers initialled and dated six books so they could not be sold.

Whitaker reported that the FDA backed down after his lawyer filed suit, advising that no books would need to be destroyed and that Whitaker may buy any of the books himself.

The story according to the FDA is quite different. After the public's attention was gained, FDA documentation is clearly above the District Office level. In a memo to file on April 9, 1999, FDA Acting Associate Commissioner for Regulatory Affairs, Gary J. Dykstra, maintained that FDA never ordered the books destroyed. Nevertheless, he acknowledged that an FDA letter of May 19, 1998, states that "a current inventory must be taken by an investigator of this office, who will also be available to witness destruction of the cookbooks, literature, and other publications for the purpose of verifying compliance". The memo also notes that "Neither Stevita nor its attorney, Ms Sarracino, had informed FDA that the company intended to destroy these materials". However, he goes on to state that "the District Office assumed that the company might choose to destroy them".

An October 26, 1998, letter from Dan Burton, Chairman of the Committee on Government Reform and Oversight, 105th Congress of the US House of Representatives, stated that the FDA had no authority from Congress to be available to witness the destruction of books. Furthermore, it would be more appropriate under the First Amendment "to refuse to be a party to the destruction of the books". Burton adds that FDA's May 19 letter was "grossly inappropriate...(regardless of whether the company agreed to allow the agency to violate [sic] its First Amendment rights)".

Oscar Rodes denies he chose to destroy the books. As reported on refuseandresist.org, Rodes refuted the FDA claim by stating: "That's absurd. I don't want to destroy my own books! How would I ever recover the cost?"

FDA investigators also requested a copy of *The Stevia Story: A Tale of Incredible Sweetness and Intrigue*, by Linda Bonvie, Bill Bonvie and Donna Gates. This created a stir, as the book was published independently of Stevita, though it was available for sale through the company. Furthermore, the book questions FDA's treatment of stevia. Eventually, no action was taken regarding this item. As the FDA stated, "the book did not mention Stevita or its products and the agency had no interest in the book".

Books considered problematic by the FDA included *Cooking with Stevia*, by James Kirkland, and *The Natural Choice*, by Kay Randall (also known as Patricia Rodes). Both persons were involved in managing Stevita Company. Dallas District Office informed the firm's lawyers by telephone on

May 27, 1998, that "literature or publications that promote Stevita stevia products for use as a conventional food and that are marketed with or displayed with those products cause the products to be adulterated as an unapproved food additive".

The agency also noted in correspondence on June 8, 1998, regarding books, that "FDA had advised Mr Rodes that he should take care not to use them to stimulate sales of Stevita brand stevia, as that could cause them to be labeling [sic] under the Federal Food, Drug and Cosmetic Act".

Cooking with Stevia was the book that an FDA official dated and initialled so it could not be sold. This action was taken on six copies of the book. Whitaker's attorneys, Emord and Associates, noted the action in their letter of June 8, 1998, when they accused the FDA of acting unlawfully under the United States Constitution. After a mix-up over the amount of books defiled, Emord and Associates wrote that the "material point is not the number of books defiled, but that the agents defiled any of the books". Dan Burton's letter to the FDA makes a similar point, stating that "FDA has no authority from Congress to issue an enforcement letter that provides for the

use of FDA officers to take a 'current inventory' of a dietary supplement company's books..."

The FDA responded to claims of its acting inappropriately regarding the destruction of books by stating that it had "acted within its authority under the FD&C Act and the requirements of the First Amendment". However, FDA revised its Compliance Policy Guide "to provide further guidance regarding the disposition of books and other printed materials that serve as labeling".

This was due to the petition submitted on behalf of Julian M. Whitaker and also David Dean Richard, an author of one of the books called into question. Richard stated in an affidavit that he lost sales of his book due to the FDA's actions of June 1998. Under FDA guidelines, labelling can include "a book, reference publication, or a reprint or copy of a scientific journal article".

Whether or not FDA maintains its position and stevia remains illegal as a food or food additive, it is still available as a food supplement, therefore the end result is the same: humans ingest it, anyway.

Chairman of the Committee on Government Reform and Oversight, Dan Burton, noted this inconsistency in his letter to the FDA: "I find the agency's treatment of stevia baffling (it is safe as a dietary supplement but unsafe as a food additive?)..."

Stevia Safety Studies

Various concerns have been expressed over the safety of stevia. Many countries have claimed their reason for not considering stevia for consumption is the lack of conclusive proof of its safety.

In a Joint FAO/WHO Expert Committee on Food Additives (JECFA) report on stevioside, it is noted that in rats, stevioside "is not readily absorbed from the upper intestine but is hydrolysed to the aglycone, steviol, before absorption from the gut." The effects of steviol on the body are not completely known, but it may be a problem because animal studies are contradictory. It was found that steviol: "...exhibited greater acute toxicity than stevioside in hamsters but not in rats. Steviol was clearly genotoxic [DNA damaging] after metabolic activation,

Whether or not FDA maintains its position and stevia remains illegal as a food or food additive, it is still available as a food supplement.

inducing forward mutations in bacteria and gene mutations and chromosomal aberrations in lung fibroblasts of Chinese hamsters." This may sound frightening, but the amount given to animals during testing of such substances can be up to 1,500 times any daily amount relative to body weight that a human would ingest.

The Committee also noted that the material tested "was poorly specified or of variable quality", not necessarily representative of the commercial product, and that "no studies of metabolism of stevioside and steviol in humans were available". Due to these considerations, the Committee concluded that it could not give stevia an Acceptable Daily Intake (ADI) rating.

The Scientific Committee on Food (SCF) for the European Commission, in its "Opinion on Stevioside as a Sweetener" adopted on June 19, 1999, came to the conclusion that, "of the specific stevioside preparation for which approval is sought", "the substance is not acceptable as a sweetener on the presently available data". Its position was similar to that of JECFA, including its concerns due to "questionable chronic toxicity and carcinogenicity studies, and possible effects on the male reproductive system that could affect fertility".

The study most commonly referred to when raising contraceptive concerns over stevia was undertaken in 1968, Professor Joseph Kuc of Purdue University, Indiana, being the principal researcher. Stevia.net reports that the study was carried out on rats, after it had been alleged that South American women used the herb for contraception. Kuc acknowledges that the findings may not be applicable to humans, but believes his methods were sound. The website quotes from *The Stevia Story* (Bonvie, Bonvie and Gates) and states that the rats in the study were given very high concentrations of stevia—and "...material from the stevia plant that would not ordinarily be consumed. This liquid replaced the animals' drinking water, and was given at such a rate as to equate with a person drinking 2.5 quarts [approximately 2.8 L] of liquid in less than half

an hour". Agriculture and Agri-Food Canada reported that further "studies conducted to confirm this result have all been negative".

The Lipton petition, an application to the FDA to use stevia in its products, is also quoted, making the point that "if this reproductive effect in rats is real and can be extrapolated to humans, then one might suspect that there would be very few children in some regions of Paraguay".

Two separate Thai studies have found that reproduction in rats and hamsters is not affected by stevia. A study published

in 1991, from Chulalongkorn University Primate Research Centre in Bangkok, found that "stevioside at a dose as high as 2.5g/kg body wt/day affects neither growth nor reproduction in hamsters". Chiang Mai University researchers had work published in 2000 regarding a study of rats being fed aqueous extracts of stevia and other plants. The findings stated that "all the investigated plant extracts have no toxic effect on male rat reproduction and progeny outcome".

However, a University of São Paulo, Brazil, study published in 1999 came up with different findings when "chronic administration" of stevia showed that "Stevia extracts may decrease the fertility of male rats".

Lack of detailed studies seems to be a problem where stevia safety is concerned. The SCF's "Opinion on *Stevia rebaudiana Bertonii* plants and leaves", adopted on 17 June 1999, evaluates the herb as a novel food and concludes that "no appropriate data were presented to enable the safety of the commercial plant product to be evaluated"—perhaps because the applicant just didn't supply enough information. SCF also notes that there was "no satisfactory data to support the safe use of these products as ingredients of food or as sucrose substitute for diabetics and obese individuals".

Professor Mauro Alvarez's work was referenced in the SCF's opinion and has been used by the FDA to raise doubt regarding the safety of stevia. Alvarez takes exception to his work being used out of context, particularly by the FDA in the past.

A letter expressing his frustration is posted at Stevia.net, where he states, "I can assure that our conclusions in these various studies indicate that Stevia is safe for human consumption as per intended usage, that is, as a sweetener".

A common argument put forward by stevia supporters regarding the safety of stevia is that it has widespread usage in South America and many Asian countries including China, Korea and Japan.

A Success Record in Asia

Stevia is widely used throughout the Asian region. It has been considered safe for use in food for many years. In fact, the situation is quite the reverse of that in the USA, Canada, Europe and Australia. Many artificial sweeteners such as aspartame are illegal in Asian countries because of safety concerns. Companies using substances like aspartame in the USA, etc., are using stevia in Asia.

Stevia is widely used throughout the Asian region. It has been considered safe for use in food for many years.

Genetically Modified Food



STRAIGHT BANANA



HOLELESS DONUT



TEFLON SPINACH (won't stick to teeth)

S.

In Japan, companies like Sunkist and Nestlé use stevia as a sweetener. Coca-Cola uses stevia in Japan for its Diet Coke, as the herb is non-caloric. A combined Australian university/government report states that "Japan is by far the most advanced country in the use and understanding of Stevia in its application in the food and pharmaceutical industries". At present, the stevia industry in Japan is endeavouring to obtain Codex Alimentarius approval of steviosides. Interestingly, there have been no unfavourable health reports regarding stevia in Japan in the past 30 years.

China has been using stevia since 1985. Shanghai City's Director of the Health Supervisory Institute was quoted in the *Shanghai Star* as saying, "over the past 17 years there hasn't been any documented case of the sweetener causing ill effects".

Stevia's Positive Health Effects

Studies have found some positive effects and possible medical uses of stevia. A University of Illinois, College of Dentistry paper, published in 1992, found that stevioside, though an intense natural sweetener, is not cariogenic, according to their data. A Japanese study from Nihon University, published in late 2002, revealed that the use of stevioside on skin tumours in mice inhibited the promoting effect of chemically induced inflammation.

Taiwanese studies showed the possibility of stevia's use for blood pressure regulation. A study undertaken on rats at Taipei Medical University, and published in 2002, showed that stevioside lowered blood pressure. The other study, published in 2000, was undertaken on humans by Taipei Medical College and concluded that "oral stevioside is a well-tolerated and effective modality that may be considered as an alternative or supplementary therapy for patients with hypertension".

Two recent studies by Jeppesen et al., from Aarhus University Hospital in Denmark, have found after tests on rats and mice that stevioside could have potential in the treatment of type-2 diabetes.

Natural therapists have been using stevia for many years to regulate blood sugar levels. According to a June 28, 2002, report on Australia's national broadcaster ABC (<http://www.abc.net.au>), the herb can be taken in droplet form with meals, bringing blood glucose levels to "near normal".

Users of stevia have also reported lower incidence of colds and flu. The herb can aid in weight loss by reducing appetite and can be used to suppress tobacco and alcohol cravings. Stevia leaf also contains various vitamins and minerals including vitamins A and C, zinc, rutin, magnesium and iron.

Stevia has been used in South America for years as a treatment for diabetes. It has also been suggested that it can aid people to get off insulin. It has been used topically on skin cancers and to treat candidiasis.

The Healthfree.com website also espouses stevia's use for skin care. It can be applied to enhance the skin's appearance or to heal acne and other blemishes and skin disorders including dermatitis, eczema and seborrhoea. The website also

reports that stevia can be used to heal cuts and scratches quickly and without scarring.

Brian Morley is a natural therapist with a biochemistry background, working in Brisbane, Australia. Morley uses stevia on patients as he says it "assists the liver in controlling blood sugar levels in the body". He says that refined sugar has a negative effect on the liver and can cause chronic fatigue and immune deficiency syndrome. Combined with bilberry, stevia can also aid sugar cravings. Morley uses stevia in a "nectar form" that has been vacuum distilled, nitrogen dried and crystallised so as not to destroy any goodness.

Stevia's Uses in Food Preparation

Stevioside is suitable for cooking purposes as it is heat stable, unlike artificial sweeteners such as aspartame. However, it is unsuitable for certain confectionary such as fudge or icing as it lacks bulk.

Stevia is used in Japan to sweeten soy sauce, pickles and soft drinks. Brazil almost followed suit in 1988 when the Minister for Health proposed that only stevia should be allowed for sweetening diet drinks.

However, Big Business opposed the idea, according to a report in *Earth Island Journal* (Northern Winter 1997-98 issue). Apparently Monsanto had made a substantial financial commitment in the construction of a NutraSweet plant in São

Paulo. It was then agreed that manufacturers would undertake studies by 1989 to incorporate stevia. However, nothing further was heard regarding the matter.

Stevia's Potential in Agriculture and Healthcare

One of the advantages of stevia is that it can be grown almost anywhere. Its native conditions are subtropical, but it has been grown in areas as far north as St Petersburg (60°N). The herb also grows well in tropical areas.

Stevia seedlings can be purchased from nurseries. The plant has the added bonus of having certain insecticidal properties; for example, it is aphid resistant.

Agriculture and Agri-Food Canada notes that "Stevia represents a new opportunity for researchers and farmers alike", but that more information is required to "optimize annual transplant production for Canada".

Stevia could be utilised to benefit research, as "production of remarkably high levels of one class of secondary metabolite is of significant interest for chemists, biochemists and geneticists and may prove to be a foundation for the production of new metabolites in the future". It also noted that because of safety concerns surrounding stevia, "there is clear need for further experimentation with respect to the metabolic fate of steviol glycosides".

Stevioside is not legal in Canada, and the only legal way of obtaining stevia is by purchasing it as a herb. In Australia and New Zealand, the situation according to Food Standards Australia New Zealand (FSANZ) is that stevia leaf may be sold as a food. However, extractable components of the plant, such as stevioside, are not legal.

Users of stevia have also reported lower incidence of colds and flu. The herb can aid in weight loss by reducing appetite and can be used to suppress tobacco and alcohol cravings.

Stevia leaf also contains various vitamins and minerals including vitamins A and C, zinc, rutin, magnesium and iron.

The Rural Industries Research and Development Corporation (RIRDC) was set up by the Australian government "to work closely with Australian rural industries on the organisation and funding of their R&D needs". Professor David Midmore and Andrew Rank put together a report for RIRDC in 2002 on the possibility of "A new rural industry—Stevia—to replace imported chemical sweeteners". The study was jointly funded by RIRDC and Central Queensland University.

The report refers to Canadian researchers' findings that 50 hectares of stevia could produce sweetener equivalent to one million dollars' worth of sugar. This "in Australia would require 240 hectares of cane to grow, i.e., productivity in terms of sweetness equivalent per hectare is high". It notes it will be necessary to "develop production and processing practices that result in acceptable financial returns to growers" yet a competitively priced end-product.

Environmental considerations are also positive in regard to stevia as an industry in a dry continent like Australia. Primary producers could benefit because the crop would offer "greater diversification opportunity and returns per megalitre of irrigation water". Insects do not appear to be of concern to stevia. There are some possible diseases "which do not appear to be a major problem", according to the report, and "spraying for control is sometimes undertaken".

David Midmore says that Australia is ready for stevia. "The time is right for large-scale production, provided we can ensure that production practices are suitable (e.g., mechanical harvesting) and that it will be grown in the correct locations (weather-wise)."

According to the report, it is expected that "consumer demand for natural sweeteners will escalate" as Australians become more health conscious and as "the incidence of dia-

betes in Australia and abroad" grows. It is also suggested that stevia could be marketed "in conjunction with sugar" to produce low-calorie products.

However, input from other organisations and agencies will be required to ascertain if "the constraints to production and acceptance of steviosides will be manageable in the near (2-3-year) future".

Currently there is an application with FSANZ for consideration of stevia as a sweetener, and according to Professor Midmore a decision "should be announced by FSANZ in a short while". A possible obstacle to the FSANZ acceptance of stevia could be the same concern expressed by JECFA: that

the breakdown of stevioside into steviol can exhibit some toxic and mutagenic activity. However, David Midmore stresses that "such breakdown is not known to happen *in situ* in the human body".

A Sweet Future for Stevia

Stevia has had a long history of use as a natural sweetener and a medicinal aid. It is heat stable, non-caloric and can be used by diabetics.

However, the US FDA has had a questionable relationship with the herb, and issues have been raised

over the safety of the stevioside extract. Yet, no adverse health effects have ever been reported or documented, including in Asia where the herb is used extensively as a sweetener.

Stevia shows great potential for the future, in agriculture and as a food.

About the Author:

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The report refers to Canadian researchers' findings that 50 hectares of stevia could produce sweetener equivalent to one million dollars' worth of sugar.

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Editor's Note:

Due to space constraints, we are unable to print all the references for this article. If you would like a copy of the complete list, you can download it from our website at <http://www.nexusmagazine.com>, or request a copy from your nearest NEXUS Office.

ENIGMA

A CLOSE CALL FROM DEEP SPACE

A collapsed star, a Black Dwarf dubbed "Enigma", is reckoned to be on a trajectory bringing it within 300,000 kilometres of the Earth in March 2003, perhaps close enough to produce significant climatic and geophysical effects.

by José Chung © 2002

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Website: <http://www.gxo.com>
José Chung story archives:
www.gxo.com/spacejunk/archives

In our obsession with antagonisms of the moment, we often forget how much unites all the members of humanity. Perhaps we need some outside, universal threat to make us recognize this common bond.

I occasionally think how quickly our differences worldwide would vanish if we were facing an alien threat from outside this world.

— Ronald Reagan, President, USA

in Speech to the United Nations General Assembly 42nd session,
September 21, 1987

When Ronald Reagan delivered that speech back in 1987, some people suspected that he might be afflicted with some debilitating mental illness. Later, during the congressional hearings on the Iran–Contra affair, when Ronnie couldn't seem to remember anything, the majority of the public was driven to the same conclusion. And when he was finally diagnosed with Alzheimer's disease, we all felt sad—but justified—in our earlier assessments. Looking back today, you really have to wonder how "disabled" he actually was.

Was Ronnie Right? What Did He Mean Exactly?

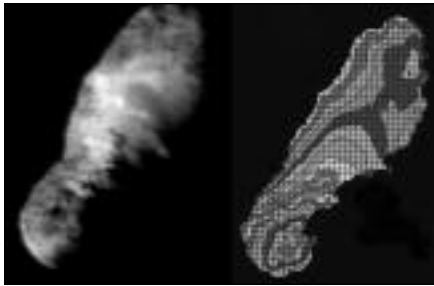
If you've been reading the papers or watching TV lately, then you've probably seen some weird stories. Even the mainstream press has been running odd bits on close asteroid approaches, UFOs and even on how a small asteroid impact could trigger global thermonuclear war. Evidently, this material has somehow made the successful leap from yellow tabloid journalism to *Washington Post* respectability.

As official *GX* [*Graphic Exchange*] chronicler of all things metaphorical, astronomical or conspiratorial, I took it upon myself to get to the bottom of this potentially dirty pile of laundry. That, as I was soon to find out, would be a fitting analogy, as much of the "official" record has clearly been sanitised.

When Reagan made that seemingly bizarre statement at the UN, did he know something that we (the general public) don't know? Was he talking about little green men, or something else?

People have been exploring the universe with telescopes since at least the time of Galileo (though the well-informed will contend that it began much earlier than that), and we've made some thoroughly amazing discoveries. We've plotted the orbits of all the planets in our solar system and the relative position of our galaxy with respect to its neighbours, and we've even made great inroads in determining the ultimate origin of our universe. Three of the most important object types we've come to study are comets, asteroids and the stars (including our Sun), each of which presents unique wonders—and potentially fatal dangers.

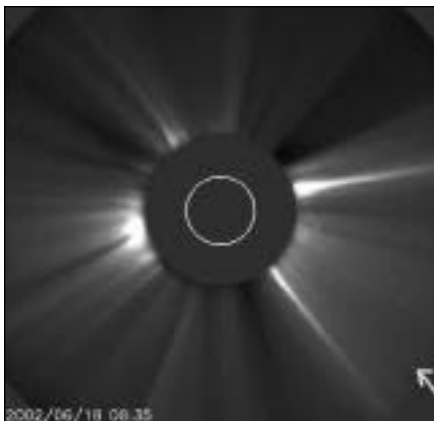
It is postulated that the dinosaurs, which once roamed and ruled the Earth, were wiped out almost entirely by a single asteroid strike about 65 million years ago in the vicinity of the Yucatan Peninsula, off the coast of present-day Mexico. The planet is pocked with evidence of other similar impacts, such as Chesapeake Bay (USA) and the Manicouagan Crater (Canada). These craters, made by asteroids measuring between 5 and 15 kilometres in diameter, wiped out the considerable majority of life on Earth, but smaller objects are constantly bombarding the planet with less devastating results. In 1908, a small asteroid (measuring about 60 metres across) exploded in the atmosphere above Tunguska, Siberia, and flattened 2,000 square kilometres of forest—and probably a few million caribou along with a number of hunters and trappers.



Comet Borrelly (topographic view at right)
(Photo credit - NASA, Deep Space 1)



The Sun expels some coronal mass.
(Photo credit - SOHO)



"Wimpy" (below right near arrow point)
(Photo credit - SOHO, 2002/06/18, 08:35)



Orbital path of object 2002 NY40 before
closest approach (above) and after (below)
(Photo credit - NASA, JPL, NEO Program)



The Moon may have been formed when a comet, perhaps 1,500 kilometres (or more) in diameter and travelling at a tremendous speed, smashed through the Earth in its early years. At the same time, it may have deposited the necessary building blocks of life here.

When comet Shoemaker-Levy 9 broke up and crashed into Jupiter in 1994, it left Earth-sized marks on the surface of the giant planet and released forces equivalent to millions of Hiroshima-sized explosions.

The Sun, which reverses its polarity every 11 years, is as capable of bringing destruction as it is of spreading nurturing warmth. Over a period of many solar cycles, the Sun's impact on its satellites (of which we are one) will vary, bringing on widespread glacial periods or seemingly interminable heat-related droughts.

We've now been in an extended Solar Maximum period for longer than anticipated. It was projected to have ended about a year ago [mid-2001], but con-

tinuing activity has created a stark double-peak in this solar cycle. Some of the solar flares and coronal mass ejections (CMEs) have been remarkable and make for great on-line viewing. The corona, which is the outermost layer of the Sun, sometimes throws off great heaps of material at speeds of up to 1,000 kilometres per second.

When solar flares and CMEs pass our way, they can sometimes even cause damage to sensitive satellites. The disruption of power grids and communication networks by powerful solar flares is well documented. And it's not so surprising once you consider that an X3-class solar flare contains as much energy as four trillion tons of TNT.

Obviously Reagan was no "rocket scientist", but he did have access to considerable pools of scientific data and his very own science advisers. Not everyone is so lucky. You'll have to settle for me.

Was Reagan simply trying to scare the nations of the world into cooperating with one another? Did he have some other mysterious New World Order

agenda? Well, perhaps we shouldn't give him too much credit. I prefer to believe that he had access to secret information, and it has only lately become clear what that was.

The Truth Comes Out—Finally

In researching material for this article, I groped my way through an endless list of websites dedicated to all manner of astronomical media. Only after having found some of the most obscure NASA interfaces did I manage to determine that rarely is everything published for the consumption of the average netizen.

Although I've long known that the government doesn't tell us everything, I never really knew how much we were missing when it comes to cosmic intelligence.

In mid-June, a small asteroid (named 2002 MN)

Several years ago,
the Russian government held
an urgent meeting (attended by
top officials and scientists) to
discuss what they termed
"The 2003 Problem".

made a close flyby of our little planet. It only measured about 120 metres across — barely enough to take out a large metropolitan city and its suburbs. It was the second-

closest encounter ever recorded without Earth actually being hit in the process. The trouble is that no one, not even NASA, noticed it until it had already whipped by. In galactic terms, 120,000 kilometres (the estimated miss distance) is barely a whisker. Okay, so they missed it. At least they tried, you say? Well, I say that they're not trying hard enough. What they didn't tell us is that another asteroid passed by two days later—at an even closer distance. Unfortunately, you won't find that posted anywhere.

The US Federal Emergency Management Agency was recently assigned a mandate to construct emergency "tent cities" by January 2003, presumably to house people displaced by a major terrorist attack. These "cities" will be capable of accommodating hundreds of thousands of people. But are we certain that the proposed disaster will be terrestrial in origin?

The C2 image at far left centre is a picture of the asteroid that whizzed by soon after 2002 MN made its close approach. Since this one is not

acknowledged, I've decided to name it myself. How about "Wimpy"?

Several years ago, the Russian government held an urgent meeting (attended by top officials and scientists) to discuss what they termed "The 2003 Problem". Few details are available, but it apparently had something to do with a massive depopulation of the Earth.

Since then, several "Earth defence" initiatives have been undertaken by various groups to improve the forecasting of close approaches by asteroids and comets.

One of the most prominent of these groups is a subset of NASA's Jet Propulsion Laboratory, called the NEO (Near Earth Objects) Program. The NEO website is one of the best resources available for monitoring and identifying all our potentially hazardous neighbours. It even has a Java-based orbit simulation program which allows you to view the positions of asteroids and comets as they swing through the solar system.

The two images at bottom left show the orbital path (or ephemeris) of a recently discovered object, 2002 NY40. The top one shows the relative positions of Earth and NY40 one week before their closest approach. The second image shows where they were a week later. Don't get too upset if you can't see one of the dots—that's just because they're virtually on top of each other.

This encounter posed less danger for the Earth than it did for our Moon. You see, the distance by which the asteroid was scheduled to miss us (given NEO's own error allowance) was almost as close as the distance between us and the Moon. Actually, as it turned out, the object succeeded in missing the Moon by some 42,000 kilometres. Pretty close. The figures displayed on various official websites disclose the amount by which it missed Earth, but make no mention of the object's proximity to the Moon during its flyby.

Two of the most interesting SOHO (an acronym for Solar and Heliospheric Observatory) views are those which may be had through the LASCO (Large Angle Spectrometric Coronagraph) C2 (close-up) and C3 (wider-angle) scopes. There is a series of C3 images (see <http://www.gxo.com>) showing the position of an interesting object which passed through its field of view in late May. This would normally be less than remarkable (probably just another comet), except that NASA will not admit to the existence of this particular object. In fact, the last nine frames of this animated sequence (which may also be viewed at <http://www.gxo.com>) were excised and never posted by the SOHO people. Datalogs indicate that the images were actually made, but never posted to the website. The catalog numbers of the missing images are: 33090948.fts – 33090956.fts.

The reason that these images were never posted is that they would show this object brightening to the extent that it would

have become the shiniest thing in the field of view, except for the Sun and two planets. That's pretty bright, especially for something that doesn't exist.

High-resolution images are often stored in FITS format, so if you manage to download any you'll need something with which to open and view them. An old copy of Live Picture would be great if you have it, but another option would be to grab a copy of a FITS browser or viewer software from one of the NASA sites, e.g., <http://fits.gsfc.nasa.gov/software.html>.

Once again, since there's no "official" confirmation of the object, I'll have to name it myself. We'll call this one "Enigma", because it acts in a very unpredictable manner. Not least among its strange behaviours is that it passes through our system in a direction contrary to all other solar-orbiting objects.

When I first spied Enigma emerging out of the inky depths of space on May 27, 2002, I thought that I had found a new comet

and reported it to the powers-that-be at SOHO the following day. When I noticed no discernible tail on this "comet", I began to think that I had made some sort of gigantic error. Maybe this was a planet. After all, that seemed to be the consensus of the people who tried to talk me out of believing that this was a comet.

Two people told me that it was Mercury—a possibility I quickly discounted, because Mercury was visible in the field of view at the same time. Then I was told that it was Mars. But Mars hadn't yet entered the field of view—and wouldn't for several more weeks. And it wasn't Saturn either, because Saturn entered the frame a few days later. All the other planets were out of range. So, it had to be a comet—or one really big asteroid.

Asteroid, I thought. Well, there was no tail, so that was plausible. However, if it were

an asteroid, it would have to be about 8 to 12 kilometres wide and be moving at about 28 km/s relative to our own movement.

Working with no assistance from NASA and with only a single point of reference (LASCO C3 images made over a period of five days), I found it difficult to compute an accurate trajectory for the object. It was then that I realised that there were two scenarios developing. It was either an 8 to 12-kilometre-wide asteroid—or something 100 times that large (about one-quarter the size of our Moon) travelling at a fantastic rate of speed, perhaps at more than 100 kilometres per second!

That simply didn't fit anything I had learned about up until that point, and there was still the matter of its contrary motion. This thing seemed to be barging its way into our solar system without a care for any of the traffic signals.

I didn't know what to believe until I found the "xxx" image (centre right) in a SOHO-related database. It appeared to be a close-up radiotelescope shot of the object, but it bore no name

THE BLACK DWARF

The Black Dwarf is a smaller cousin of the Brown Dwarf, situated by diameter between the Jupiter-sized (or larger) "brown" variety and the much smaller (but incredibly more dense) neutron family of star-type objects (quasars, pulsars, etc.).

By one current theory, black dwarfs are cooler and denser than most other varieties of star matter, and are thought to have a higher gross specific gravity (sg) than our Sun, albeit in a much smaller package and with a significantly lower total mass. It is theorised to be one of the less common mass configurations in stellar circles, since it is likely the by-product of a short-life star of minimal relative mass which reached "ignition" primarily due to its proximity to other stars or alternative energy sources, rather than by accumulation of sufficient critical mass.

Black dwarfs may also be some of the oldest star-related phenomena still extant. The rarity of these objects may be due to their probable tendency to intersect with other bodies during transitional orbits around higher-mass objects.

in the database log, save "xxx" and the capture date.

What Happens Next?

We wait. If the orbital diagram (bottom right) is correct, we should begin to get some interesting clues very shortly. But you don't have to take my word for any of this. You can check it all out for yourself on-line, though you may have to do some digging if you want to find the really good nuggets of information.

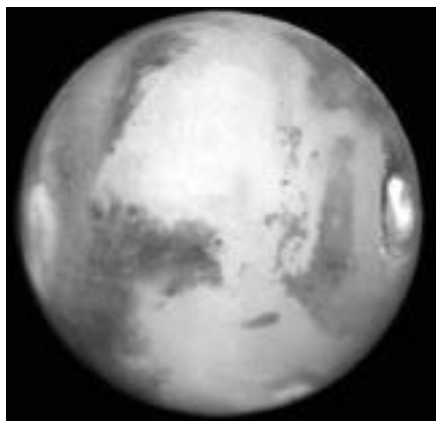
Here's the schedule so far:

August to November 2002:

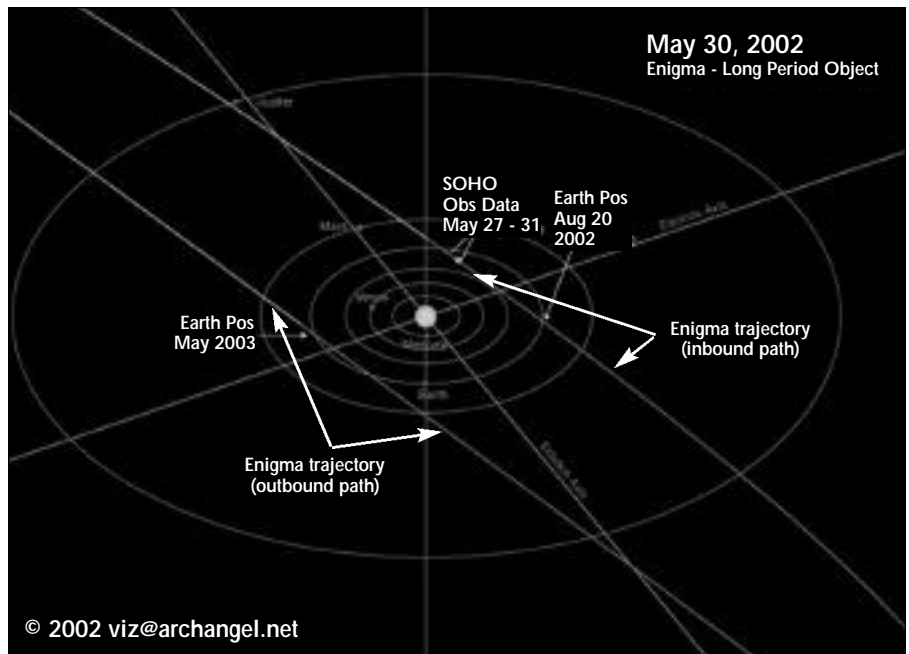
Increased asteroid traffic and the discovery of several new infrared sources of radiation, including previously undiscovered supernovae, as we pass through the area of space travelled by Enigma during late May and early June 2002. [Author's note: This first passage was relatively inconsequential and occurred very close to the time of the SOHO observation, with the point of closest solar approach being June 5, 2002.]

[Author's update, as at early January 2003: An unexpected shift in the Interplanetary Magnetic Field (IMF) occurred between August 1 and 4, and created fantastic auroras across North America; scientists at NASA were baffled. A new nova was discovered on September 14, and the next day a "red comet", approx. 400 metres in diameter, made its closest approach to Earth at just over 13,000 kilometres mean distance, passing barely south of the equator to our relative east. There was a good deal of meteoric fireball activity during November over much of the American southwest as well as over South-East Asia and parts of Australia. Also, there was that sensational display over Turkey on November 1st...]

December 2002 to February 2003 : Fewer space debris alerts, but an uptick in stormy weather as the object begins its second approach to the Sun. Given that this puppy weighs in at roughly 18 times the mass of the Earth (in a package only about a quarter the size of the Moon), it is expected to have predominant gravitational effects upon our terrestrial mood. This should be especially true of our weather, which is



Mars
(Photo credit - Hubble Space Telescope)



The Enigma trajectory is represented by the dark/light-blue-coloured line segments. The dark blue portion of the line defines the portion of the orbit below the Earth-relative ecliptic, while the lighter blue segments show where Enigma rises above the ecliptic. There are two continuous lines depicted, the upper one of which is the original in-bound "track". The lower line shows the exit path.

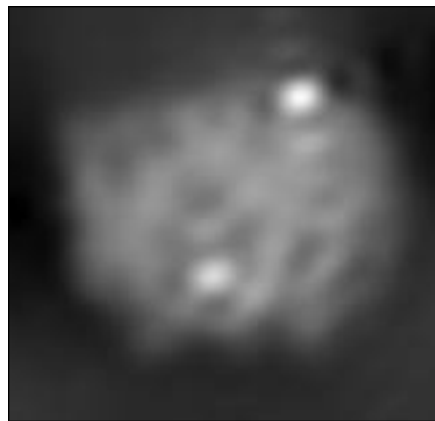
strongly perturbed by the fractal-like influence of coriolis-type energy events, e.g., the close proximity of a deep gravity object which also happens to have a strong IR energy signature.

[Author's update: There was a close call from an asteroid, designated 2002 XV90, that made its closest approach on December 11, although it was only noticed two days afterwards. This approx. 50-metre-diameter object passed Earth at 0.3 lunar distances, or 116,600 kilometres—one of the closest flypasts ever recorded.]

Early to Mid March 2003: Passing just south of the main ecliptic plane of our solar system at a point very close to our own position, the collapsed star (or Black Dwarf) known as Enigma will pass within 300,000 kilometres of our planet at a speed of about 120 kilometres per second, trailing a tail of debris and cinder-like iron and carbon filaments. When these strike the atmosphere, they will almost immediately oxidise and precipitate in the form of red rain. This may also occur during November 2002 [it did happen over India], as it did during the month of August, when several reports of this phenomenon came in from Vietnam and India. Red fireballs streaking across the sky are also to be expected as larger pieces of debris brush through our resistant atmosphere.

More Surprises to Come

While some have predicted that the poles of the Earth will shift in the [northern] Spring of 2003 with the arrival of a Brown Dwarf star (variously referred to as Planet X, Marduk and Nibiru), I can find little direct evidence to support that contention. But I feel that the case for



Source unknown; unknown type
June 5, 2002, at 12:04 hrs

Enigma is much stronger, as we have NASA's own evidence to back up the theoretical base of my speculation.

At the end of this article, you'll find a table of the best space imagery resources on the Internet. Many of the government-run programs (NASA, etc.) will also permit their images to be used royalty-free, with some of them being made available in both low and high resolution.

So whether you're interested in scientific evidence corroborating the predictions of Nostradamus or searching for great Hubble photographs, the Internet is definitely the place to be.

Reagan may have been right after all. We may indeed be facing a threat from outside our world. And although the absence of alien beings in this scenario may disappoint diehard ufologists, the potential consequences are no less dire.

This article ends here on paper, but there are plenty more mysteries—including controversial information recently published on a "red comet" sighting and what it may mean as we get closer to [northern] Spring 2003. [Author's update: It is my belief that the object is trapped in an Earth-centric orbit, and will be for the next

few months at least. As at early January, no NASA observations on this red comet have been posted in the public domain.]

If you'd like to see Wimpy and Enigma in full motion, along with a few other curious items, go to the *GX* website at <http://www.gxo.com> and follow the link from the October 2002 issue.

And tomorrow is another day...or so we hope.

PLANET X CONFUSION

While I do believe that we will be having a close encounter with a high-speed celestial body in early 2003, much of the hype surrounding Planet X actually stems—as you will find if you actually read the linked docs at Harvard and other sites—from the search for a 10th planet, somewhere beyond the orbit of Pluto. The "Planet X" moniker was in wide use in the heady days after the (confirmed) discovery of Pluto, when the prospect of successfully reaching out to find the "next" planet seemed almost tactile. And imminent.

Is it possible that a high-mass body could be floating back and forth between our Sun and a massive Brown Dwarf star several trillion miles distant? I'm satisfied that the possibility exists, because such an orbit would break no known natural laws. This motion could be enabled by the evolution of a "helical homing orbit".

I'm inclined to believe that such a body would be considerably smaller and less massive than popular theory dictates. This doesn't relieve us of potential peril to any great extent, because the body that I do envision is much more massive than our own planet, with a far greater density (sg).

— José Chung, December 2002

About the Author:

José Chung is a well-known Canadian expert in digital imaging technologies, including the complex data systems designed to automate their creation and manipulation. Mr Chung is also involved in the exploration of Unified Field phenomena, particularly in the area of macro analogies for quantum mechanical effects. Though originally content with the quality and volume of space-related information dispensed by "official" sources, he gradually waxed more dissatisfied as increasing amounts of vital information began to disappear from publicly accessible databases.

This article is the result of following one of those broken threads, which just happened to lead to many more loose ends. It was first published in the October 2002 issue of *Graphic Exchange (GX)*, based in

Toronto, Ontario, Canada. You can visit *GX* at <http://www.gxo.com>, and the José Chung story archives at <http://www.gxo.com/spacejunk/archives>.

References

The Indispensable Astronomy Website List

1) Official Astronomy Sites

- Near Earth Objects (asteroids, comets)
<http://neo.jpl.nasa.gov>
<http://newton.dm.unipi.it/cgi-bin/neodys/neoibo>
<http://cfa-www.harvard.edu/iau/mpc.html>
- SOHO (Solar and Heliospheric Observatory)
<http://sohowww.nascom.nasa.gov>
- SOHO Databases
Intermediate: http://sohowww.nascom.nasa.gov/cgi-bin/summary_query_form
Expert: <http://sohodata.nascom.nasa.gov/cgi-bin/gui>
- Hubble Space Telescope
<http://www.hubblesite.org>
- General Space and Astronomy
NASA: <http://ssd.jpl.nasa.gov>
NASA: <http://science.msfc.nasa.gov>
PIXIE: <http://muir.spasci.com>
- Space Station:
<http://spaceflight.nasa.gov/realdata/sightings>

• Auroras:

http://science.nasa.gov/spaceweather/aurora/gallery_0laug02.html

2) Not-so-Official Sites

- Everything weird: <http://www.cyberspaceorbit.com>
- Many good answers: <http://www.badastronomy.com>
- Spaceweather:
<http://www.spaceweather.com>
<http://206.131.246.33/sun/noaa.html>
<http://rsd.gsfc.nasa.gov/goes>
- FITS Viewing software: <http://fits.gsfc.nasa.gov/software.html>
- Planet X, Nibiru, Marduk, etc.:
<http://www.mgr.org/PlanetX.html>
<http://www.zetataalk.com>
- UFO Stuff:
<http://www.mimicmedia.com/ufo/Ufomiscfilelist.htm>
<http://www.siriusufo.org/engnews/haber.htm>
- Graphic Exchange Online: More data pertinent to this article (MPEGs, JPEGs, etc.):
<http://www.gxo.com/spacejunk>

DR PHIL CALLAHAN ON THE POWER OF PARAMAGNETISM

*Dr Phil Callahan's
research into
paramagnetic soil
fertility, plant
growth, infrared
radiation and insect
biology has
enormous
implications for
agricultural
sustainability.*

An interview with
Dr Phil Callahan

by **Graeme Sait © 2001**

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Professor Philip Callahan, PhD, the author of 17 books and over 150 published papers, is widely regarded as a leading light in sustainable agriculture. His breakthrough work with insects and infrared radiation is a milestone in the understanding of the link between nutrition and pest pressure.

Dr Callahan's more recent research and discoveries in relation to paramagnetism are only just beginning to achieve widespread acceptance. Paramagnetism in agriculture is a powerful growth force which enhances root development and stimulates the multiplication of micro-organisms. Graeme Sait spent an illuminating afternoon with Dr Callahan during the December 2000 *Acres USA* conference in Minneapolis.

PLANTS EMIT INFRARED RADIATION

Graeme Sait: In the foreword to your book on paramagnetism, your editor, Fred Walters, stated that you consider your work in this field to be the most important of your life. Four years have passed since the publication of your book. Are you happy with the impact of your findings in regard to agriculture?

Phil Callahan: Yes, I'm very happy. There are numerous farmers who attend these *Acres USA* conferences who have tried the concept successfully. Also, in your country, some of the big corporations are now working with paramagnetism and plant growth. The book really got things started, because competent people can sit down and read the book and then go out and find out for themselves.

Graeme: The reason I asked if you were happy with the progress relates to what I consider to be snail's pace progress with your other major discovery. For the sake of readers not familiar with your work, I'm referring to your discovery that plants emit infrared radiation, which magnifies scent molecules. Insects use their antennae to detect the source of these molecules. Healthy plants emit a different signal than unhealthy plants, and insects are more attracted to the nutritionally deficient plants. This incredibly important finding has largely been ignored by entomologists, but the military was quick to see its significance. In fact, the heat-seeking missile was developed as a result of your work. How do you feel about this?

Phil: I'm satisfied with my paramagnetics work, but you have to differentiate between this and my infrared insect work. We are still working on projects, which means that eventually we will be able to generate frequencies that will attract insects.

My interest in paramagnetism began with a study of sacred places. I visited these sites all over the world—Catholic, Buddhist, Moslem, even Australian Aboriginal sites. I noticed that the plant growth was always better at these places, which always seemed to involve rocks. Further investigation revealed that these rocks were highly paramagnetic.

The point is that this force was already there. I didn't discover it. It is there to be harvested. The archaeologists would call this "gathering". Good farming is not synthetic; it must involve working with nature rather than with synthetic poisons. Paramagnetic materials are there to be harvested. Good farming is "gathering".

In terms of the electromagnetic work, what I did there was to look at the insects' antennae, because I was experienced in radio technology. I spent the War in Ireland at a top-secret radio station. The system I worked with was not a solid-state system that you turn on and it keeps working. It was a vacuum tube system, and it worked for 24 hours a day for two years to keep the coastal command planes finding their way home. I had to keep this system in there at all times. If I made a mistake, there might be 300 dead pilots. I was tied to that station, but I learned a lot about radio.

Eventually I looked at the insects' antennae system and started experimenting. A

simple US\$2 experiment put me on the right track. I took a corn plant and used a box to diffuse the scent from the plant. Beside the box I placed a piece of hairy cloth (which was hairy like corn silk) and shone a blue light on it. Out of 2,000 eggs laid by the corn worm moth, 1,990 were laid on the piece of hairy cloth instead of the corn plant.

From this simple experiment, I realised that the energy from the light was combining with the energy from the scent and raising the power of the scent far higher than what it was at the plant or point of origin. I realised that scent was involved and that scent was really acting as an oscillator. It's all common sense. If scent is an oscillator, then you start looking for the frequency. The infrared part of the spectrum was the obvious choice.

The problem with gaining acceptance of these new concepts relates to the fact that entomologists are tied to 100 years of olfaction theory, which does not cover the concepts of scent and frequency. With paramagnetism, you simply need to apply a highly paramagnetic crusher dust to see the results. Farmers are practical scientists: if it works, they do it. With the infrared work it involved disturbing the status quo, and that's a lot harder task.

Graeme: It's also easier with paramagnetism, because you have developed your PCSM [Paramagnetic Count Soil Meter]. When growers see the direct relationship between productive capacity and the reading on the meter, then the whole concept is lifted out of the realms of abstract theory. It virtually can't be denied.

Phil: Actually, the entomologists could repeat some of my simple experiments and they would see what is undeniable, but they don't want to because they have a mindset against it—a paradigm, it's called. There is no paradigm against paramagnetism because no one has ever heard of it before.

PARAMAGNETIC ROCK EMITS PHOTONS

Graeme: I understand that your latest research suggests that paramagnetic materials are a source of subterranean light to increase root growth. Can you explain this phenomenon?

Phil: Yes. Paramagnetic force is light from rocks for the roots. The rock is actually a transceiver, collecting magnetism from the cosmos and throwing it back out to the roots. If you take a paramagnetic rock and put it into Dr [Fritz-Albert] Popp's lab in Germany and measure it with his instruments which count photons one at a time, you'll find that a highly paramagnetic rock puts out 2,000 to 4,000 photons. If you put that rock with some compost, if you treat it organically, it goes from 2,000 to 4,000 photons to 400,000 photons. Now you are generating a light for roots. Roots are wave-guides, just like the antennae on insects. If you clean off the roots and shine a light on them, they'll wave-guide just like a fibre optic. Dr Popp has a US\$100,000 instrument to measure light in the form of photons.

I can demonstrate the phenomenon with a \$200 instrument called a pinhole camera. You just drill a hole in the lens cap and tape a rock to the camera in total darkness. In three weeks

you can develop a film that will show lights with every colour in the rainbow. There are so few photons coming off, you have to leave it there for three weeks to get it, but the film is sensitive to light, and if you leave it there long enough you'll get a picture. This is irrefutable proof that paramagnetic rock generates light. Remember that plant roots are there for three months' minimum, so they get plenty of light.

Graeme: That's fascinating stuff, but it's only a recent finding. Was this how you always theorised it was working?

Phil: Well, in this case I knew it worked, but I had to find the mechanism of *how* it worked. Some of my experimental work suggests huge increases in plant performance. For example, I took rye grown in sandy soils with a paramagnetic level of 60 cgs [centimetres-grams-seconds] and fed those soils with paramagnetic rock. The rye, before treatment, had 10 to 15 nitrogen nodules on the roots, but after treatment the number increased to 200 nodules. It suggests that the bacteria in the

soil can't convert minerals into a plant-available form without this paramagnetic force. They will never utilise all that fertiliser they're dumping on them without the paramagnetic force. This force is to roots what light is to chlorophyll. If you don't have light, then chlorophyll can't work. If you don't have paramagnetic force, then the roots can't work.

Graeme: Well, we've had a recent experience which confirms exactly what you are saying. I'm not sure if you are aware of our company, Nutri-Tech Solutions. We specialise in fertility analysis and personal prescription blends, utilising a combination of Albrecht soil balancing principles and biological activation techniques. We have recently begun importing your paramagnetism meters to expand our coverage further. Our approach has been remarkably successful, to the point that we are now the fastest growing agricultural company in our country.

Recently we had a rare failure. A couple growing lychees in north Queensland had experienced three years without fruit and they turned to us for help. A soil analysis revealed

deficiencies in almost everything. We produced a prescription blend covering all deficits at quite a cost to people in their position. Unfortunately, we still didn't get a crop that season. We were really scratching our heads at this stage, so we shouted them another soil test to see if we could diagnose anything. Their soil sample arrived at the office the same day as the first shipment of your meters. We decided to test the soil for paramagnetism. That soil measured minus 20 cgs on the meter! Paramagnetic energy was the limiting factor here, and, as you said, all the fertiliser in the world couldn't correct the problem.

Phil: Well, none of this stuff is going to work without some of this paramagnetic energy. It can't work without light.

Graeme: This really is an amazing discovery. It's so important for those with non-volcanic soils.

Phil: I'll tell you, Graeme, and I'm not saying this because of me. I don't even care if they give me credit for it. I'm trying to save the family farm. This is, in my opinion, the biggest agricultural discovery in the last century, but I didn't discover paramagnetism; I discovered the *use* of it. That's the difference.

...plants emit infrared radiation, which magnifies scent molecules...

Healthy plants emit a different signal than unhealthy plants, and insects are more attracted to the nutritionally deficient plants.

WORKING WITH PARAMAGNETISM

Graeme: I'd like to ask you a few questions about the mechanics of paramagnetism for my own benefit and for the readers. Is there any relationship between paramagnetism and Brix levels?

Phil: A recent article in *Acres USA* [September 2000] cited research where there was a six-point difference between low and high paramagnetic soils. It's not the complete answer, but it certainly plays a role.

Graeme: In your book you suggest that compost, micro-organisms and paramagnetism are the principal ingredients in sustainable agriculture. We use a lot more inputs than that, and from experience I feel that this analysis is too simplistic. Calcium, potassium, phosphorus and trace elements are often still necessary inputs.

Phil: I'm not anti-chemical. Like Arden Andersen and Phil Wheeler, I believe that muriate of potash is indefensible; but the point I am making is that if you don't have paramagnetic energy in your soil, then the fertilisers you are applying are simply not being utilised. The family farm is at risk because money is being wasted.

If you need nitrogen, then use the best source for your soil, but don't use anhydrous ammonia. I'll tell you something about this product. Research has been cited, suggesting that earthworm counts can increase following an application of anhydrous ammonia. Now, earthworms are considered the epitome of high fertility. The fact here is that ammonia attracts insects, and it also attracts earthworms. Dead roots outgas ammonia, and earthworms track this emission because dead organic matter is what they feed on.

You really have to understand the bigger picture when analysing anything. The tendency toward rigid, narrow-minded disciplines, considering just a little part of the picture, is dangerous. A holistic approach is essential.

Graeme: We offer a free service to growers, measuring local crusher dust to determine the fertilising potential of these materials. Basalt is the predominant paramagnetic material in Australia. There is a huge variation between samples, with a variation between 100 and 3,000 cgs on the meter. Why is there such a variation? What exactly is it that determines levels of paramagnetism?

Phil: This is pure speculation. I'm not a volcanologist, but there appears to be a relationship between the amount of magma in an eruption and the paramagnetic level of the rock erupted. Magma is from down low; many small eruptions simply don't contain this deep material. Heat is the key ingredient. Even simple composting can lift paramagnetic levels. Compost alone can lift a soil from 30 to 70 cgs.

Graeme: We've increased paramagnetic readings in the soil by up to 700%, simply by correcting the calcium/magnesium ratio and lifting oxygen levels in the soil.

Phil: Oxygen is the key here. It is the most highly paramagnetic gas. When this magma erupts, it rains down and it picks up oxygen. There is a link here between the heat and oxidation.

Graeme: There is one interesting phenomenon I would like to discuss. We do some work in an area in Queensland called Blackbutt. I've seen your references to optimal and high paramagnetic levels, but this particular area reads far higher than

any of the soils you mention. Paramagnetic levels range from 3,000 to 10,000 cgs. The interesting thing is that, even at these elevated levels, there is still a difference in yield between soils measuring 3,000 and those measuring 10,000 cgs. Even more interesting, soils measuring 7,000 were still showing a visible benefit from the application of basalt crusher dust which measured just 2,000 cgs. Can you explain this?

Phil: Here you are looking at remineralising benefits. It may be cobalt or iron. Phil Wheeler suggests that nickel is often the missing link. Whatever the case, the response from the crusher dust isn't coming from paramagnetism here. Paramagnetism stimulates bacteria to increase the bio-availability of micro- and macro-nutrients, but if you don't have those nutrients present, you won't get the desired results. You could theoretically have a soil measuring 15,000, but without calcium it would not produce.

Graeme: How reliable is paramagnetism as a plant growth stimulant? Can any grower source a good crusher dust, apply it and expect to see results, assuming that his existing soil levels are low?

Phil: No, definitely not. Soil life is the thing. Paramagnetism works with compost. There may be hundreds of organic growers out there doubling their yields, but when you apply the same material to a dead, chemically farmed soil it

won't work. If you don't have a minimum level of organic matter, paramagnetism doesn't work. I've even trialled it at home. Both of my turnip plots have had paramagnetic material added, but one has also had compost. There is no comparison between the growth: compost is the key.

Graeme: That's interesting. I had no idea that the link was so strong. Is there a one-on-one relationship between increasing organic matter levels and response from paramagnetic materials?

Phil: It's pretty complicated, and we haven't yet done the research to be able to be that precise. There's another 10 years of work here, and I can't do it all.

Graeme: One of your strengths is your capacity to bring together the threads of many different disciplines to offer a more holistic explanation. This is in direct contrast to the reductionism of modern science. Has this broad-stroke approach proved to be a handicap in terms of mainstream credibility?

Phil: The generalist approach is not for anyone who wants to win a Nobel Prize. Chuck Walters gave me a prize last year—a little glass plaque—and I said: "This is my Nobel Prize." It wouldn't mean a hill of beans to me to win the Nobel Prize. I mean, the guy who invented DDT got the Nobel Prize. Credit is rarely given where it is due.

My favourite example is the 19th-century scientific genius, John Tyndall. Tyndall actually discovered penicillin 80 years before Sir Alexander Fleming did. He discovered that scent molecules absorb infrared radiation. He actually said that this is the way olfaction works. Tyndall also discovered paramagnetism, so both of the things I'm working on today were discovered in 1850. This is so often the case in science, but there is so much dishonesty in this industry. Egos cover the truth, and credit is not given where it is due. I actually discovered these things myself, but then found out later that Tyndall had found these things before I did.

...the point I am making is that if you don't have paramagnetic energy in your soil, then the fertilisers you are applying are simply not being utilised.

Graeme: One more question about measuring paramagnetism with your meter: how do you differentiate between ferromagnetism and paramagnetism, when both affect the meter reading?

Phil: Yes, that is a problem. Obviously, the ideal is a material with low iron levels and a high paramagnetic reading.

Graeme: We work with a scoria/crushed lava product called Nutri-Score, with a reading of over 3,000 cgs, but it only has 7.0 ppm of iron. We often combine it with other materials with water-holding capacity, like the soft rock phosphate and humates, and then pump a microbial inoculant into the blend. When the scoria fines are part of the blend, the microbe count jumps from 1.0 billion per gram to 2.5 billion per gram.

Phil: That's right. It works every time, but in the soil you have to remember that you still need all of the chemicals in the right balance. You will still need nutrition to benefit from paramagnetism. It's part of a bigger picture. Science is supposed to study nature. When you see something happen, you experiment with it. Then you try to engineer it. This is when the maths comes in, but it should come in after the experiments, not before. Thousands of researchers sit around theorising with computers. That's not the way science is supposed to work.

Graeme: One other thing we've noticed is that paramagnetic levels are usually higher on elevated ground. Even in the Queensland case, where levels varied between 3,000 and 10,000 cgs, the higher readings were found at an altitude of just 400 to 500 feet. What is the explanation of this?

Phil: When the volcano goes off, the magma comes up from the bottom. It forms droplets and is charged up with oxygen. When it drops back down, more of it will land near the top of the cone. The wind gets hold of it and spreads it more thinly elsewhere. The weaker stuff will always be at the bottom.

WEEDS, HERBICIDES AND ELECTRONICS

Graeme: In your book, you make a statement about the purpose of weeds. You suggest that weeds are present when nutrients are missing and that they serve the function of nutrient recycling, bringing up nutrients from down deep and often actually increasing paramagnetic levels.

Phil: Yes, that's correct. They are a deficiency signpost, and they do recycle. The increased paramagnetism is to do with the extra minerals and the extra oxygen allowed into the soil when weeds help condition the soil.

Graeme: But when you weigh up the nutrient and moisture competition related to having weeds in your crop, do you still consider that we can live with them?

Phil: Often we can. There are many times when we overestimate the competition caused by weeds. We also have to look at the alternative, which is herbicide. All herbicides kill micro-organisms. Weed killers are far worse than insecticides in this regard.

Graeme: You have mentioned the negative aspects of herbicides. How does no-till farming rate with you in this regard? No-till farmers are some of the biggest herbicide users.

Phil: Well, I must agree. Herbicides ruin no-till. All herbicides kill micro-organisms. Some of them are more destructive than others. Atrazine is probably the worst, but Roundup is also a killer.

Graeme: That's interesting, considering the fact that Roundup is always promoted as biodegradable.

Phil: It may biodegrade eventually, but it's never specified how long this may take. The fact is that residues remain for many months. Earthworms don't like the stuff. Darwin himself stated that anything that will kill a plant will also affect earthworms. As I said, herbicides are far worse than insecticides.

Graeme: We have been promoting the concept of using humic acid with herbicides to tie up residues and reduce ongoing damage. Are you familiar with this idea?

Phil: Yes; it's definitely a good concept. I think Arden and Phil Wheeler are promoting similar ideas. Phil Wheeler is a brilliant young physicist and a great teacher, but he tells me he really has to take it easy when he is talking about paramagnetism, because it is such a strange idea that it tends to alienate people.

Graeme: I disagree with Phil [Wheeler] on that score. I agree that Phil is a highly credible communicator, but his work with radionics has far more alienating potential than the concept of paramagnetism. Your PCSM takes the "witchcraft" out of the picture. This meter is 100% reliable. If you have a good, highly productive soil, it will always produce a high score on the meter. Conversely, if you have a problem area, then there will always be a much lower reading.

By contrast, it is a fairly hard sell to tell a conventional grower that he can post a Polaroid photo of his crop to the other side of the world and his problems will be diagnosed. It may be true, but it is definitely more of a fringe-dwelling concept than paramagnetism. Paramagnetism is now provable using your meter. I feel that it's been completely removed from the mystical realm.

Phil: Yes, it's good, solid physics. Even electrical engineers take one look at this meter and say,

"God, that's it!" With radionics there is one main problem: when you start trying to make a human being into an antenna, you've got troubles because you can't tune a human being. One might measure 200,000 ohms resistance, and another measures 500,000 ohms. When you're trying to match an antenna to a transmitter, this is a big problem. A scanner is essentially an impedance box, except in that case you have a stable antenna and a stable transmitter. Scanners are incredibly operator-dependent. Selling one of these things to me would be like selling me a violin and wanting me to play "Danny Boy" on it. I don't have a musical ear. Some people—dowsers, for example—are very sensitive to radionics, but the majority of people cannot reliably operate a scanner, and that is the major problem with this technology.

Graeme: Is there any hope of developing a reliable scanner which is not dependent on the human antenna?

Phil: Yes, there is, and I'm working on a prototype at the moment. It's a remarkably simple idea, which should cost a fraction of the current cost for scanners when I've perfected it.

Graeme: You certainly managed to reduce the cost of paramagnetic meters by several hundred per cent with your PCSM. What is the history of the development of that meter?

Phil: Well, I knew what I wanted but I wasn't capable of wiring it up. I had to bring in an electrical engineer, Ed O'Brien, the head of an electrical engineering department.

If you don't have a minimum level of organic matter, paramagnetism doesn't work.

Graeme: Returning to paramagnetism in agriculture, we always push the paramount importance of calcium in the fertility equation. What is the relationship between paramagnetic response and calcium levels?

Phil: Well, calcium is the most important nutrient, and you won't get a good response from paramagnetic rock dusts if you have ignored your calcium. Nutrients in general won't be available if you don't have enough calcium. Paramagnetism is not a substitute for nutrition. It is something extra.

Graeme: One more question about "living with weeds", because they are a major problem on both biological and conventional farms. You suggest that there is an optimum weed population. What is that optimum and how is it achieved?

Phil: Well, I think what should happen with weeds was best illustrated by Phil Wheeler in his address today. He said, "I fertilise for the plants and not the weeds." If you have weeds growing as high as your corn, then you have not been fertilising correctly. If the crop is thriving with the right inputs, it will always outperform the weeds.

ANCIENT TRADITIONS, MODERN RESEARCH

Graeme: There seems to be a tendency in eco-agriculture to compare some of the concepts to the ancient Chinese philosophy of yin and yang. Arden Andersen likens growth energies versus reproductive energies to the yin-yang concept, and you make similar suggestions for paramagnetism and diamagnetism. Is there common ground between these ideas?

Phil: Absolutely. I once photocopied many sections from 15 volumes I borrowed from the USDA Library, which covered the link with ancient Chinese philosophy, science and religion. The old dowsers used to look for the right place to build a house. They were dowsing places that were highly paramagnetic.

Actually, while I was in Australia last time, I was talking about Ayer's Rock with an Aboriginal man. I mentioned that it was a sacred place, but he informed me that the rock was actually a meeting place, because it could be seen for miles around. The actual sacred place is 30 miles from there. I can't remember the name of the area. When I got to Ayer's Rock, I measured it and it only measured 30 or 40 cgs. When I went to their sacred place, it measured 5,000 cgs!

Graeme: You certainly have a great love for travel and adventure. Has age tempered this passion at all?

Phil: People have a strange idea about age. Five years ago, at 70, I decided to find a place where nobody had ever been, so I found 25,000 square miles on the Amazon, which the Peruvians would never enter. It was controlled by a headhunting tribe with a vicious reputation. The Peruvian government rented me an army plane; I guess they wanted to see what would happen. I flew in with a friend of mine. The pilot dropped us off and I said, "Don't forget to pick us up in three weeks."

I walked in and found the headhunting tribe and lived with them for three weeks. There was no problem. The key is to go in smiling. If you go in unarmed and not speaking their language but with a big smile on your face, they are fascinated. It's like bringing them a new TV. Pretty soon they're calling you "Uncle". We were almost killed in the plane going in.

Motor vehicles and aeroplanes are far more dangerous than most of my adventures. Almost every member of my family has had serious car accidents; I've had two. The whole family has recently been involved nursing my wife who is just recovering from being hit by a truck; it was her second serious accident.

It was a great experience with the headhunters; I might write a book about it some day.

Graeme: You've had 17 books published to date. Are you working on anything at present?

Phil: Yes, actually I consider it pretty important. I'm doing a handbook on paramagnetism. The first part will explain what volcanoes do; the second part will describe erosion—good erosion—where paramagnetic earth goes down to the rivers. Then I'll explain why you need it in the soil. Part two will contain simple experiments with earthworms and nitrogen nodules on roots, with different chemicals. It will be a simple handbook which should clarify paramagnetism for many farmers.

Graeme: Are you familiar with the American researcher Bruce Tainio? He has pioneered the concept of monitoring the pH of leaf sap as a guide to plant health and nutrient requirements.

Phil: No, I haven't heard of his work.

Graeme: Well, apparently he has also been researching paramagnetism. I hear that he has been crushing highly paramagnetic material with a ball roller to reduce it to the finest powder. This powder, when applied in tiny applications, has increased micro-organism counts by over 300%. This brings me to my next question. How important is particle size when applying paramagnetic materials to the soil?

Phil: Well, from a practical standpoint, dust is hard to work with. In the lab it may be relevant, but in the field we've had better results with coarser material.

Graeme: In our case, we would usually mix the dust with other materials to avoid this problem.

Phil: Well, if you're mixing fine dust with compost, I think you would be better off. Whatever you do, it's best that the material be "disced in", otherwise there is the possibility of encouraging shallow roots.

WATER AND PARAMAGNETISM

Graeme: We've also found a difference in readings between wet and dry soils.

Phil: Yes, that would be right. Water is diamagnetic. I'll tell you something important about water and paramagnetism. Rainfall records show that in the American Midwest they have had 12 inches of rainfall every year for the past 100 years. There were never droughts prior to World War II, but now they are commonplace. They are still getting the same water. So what's changed? Fifty to 60 years ago, average paramagnetic levels in those soils were 300 to 400; now they are always below 100 cgs.

The results I've just received from the Australian company Boral, which is working with these concepts, confirm the reason. Boral has found that paramagnetic materials increase water-holding capacity by 50%.

The point is that the paramagnetic force can and will erode over time. Modern farming techniques speed that erosion. It's

**Boral has found that
paramagnetic materials
increase water-holding
capacity by 50%.**

not a new phenomenon. It's just sped up a lot.

I've been working in Phoenix, Arizona, looking at tabletop basin farming. How did the Indians have farms on top of the mesa in 12 inches of rainfall with no way to irrigate at all? One mesa I found was suitable for irrigation because there were 12 springs on top, but all the rest of them had no springs. One archaeologist suggested that they must have carried water up the mountaintop, but this was simply not feasible. They had to depend on the rain. I have a photo of a mesa, which was actually taken by Charles Lindbergh. You can see in this photo exactly where the Indians had farmed. I went to the mesa and under the adobe, where it had never been farmed, the paramagnetic levels were 800 or 900, but where it had been farmed the levels were down to 50 or 60 cgs. Basically, the Midwestern farmers had eroded away their paramagnetic force in a 50-year period, while the Indians had taken 300 or 400 years to achieve the same depletion.

The point I'm making is that these soils can easily be re-energised. It may only last 10 or 12 years in our irrigated farms, but it is relatively inexpensive and it can make a huge difference to production. The Indians abandoned their land when the energy had fallen below 100, as it was no longer viable. We don't need to do that.

Graeme: Yes; we have found that, in orchard situations where growers use under-tree sprinklers, the paramagnetic reading is often half of the inter-row area or the area just outside the sprinkler line. I wasn't aware that the energy could be eroded like this.

Phil: Yes, that's what's happening, but it's more than that because during the rain period the tree collects water and then drips, and this dripping action will erode paramagnetism. I measured Stone Mountain in Georgia, which is white granite. The top of the granite, which is exposed to the elements, measured 30 or 40 cgs, but the bottom, where it is sheltered, measured 2,000 cgs. The force weathers over time.

Graeme: Do you do much in the way of seminars or talks here in the US?

Phil: No, there is far more interest in these concepts in other countries. I only ever speak at *Acres USA* conferences these days. When I was in Australia last, I gave 18 talks. While I was in Japan recently, I had 35 invitations to talk. I had actually been invited over there as the first Westerner to open one of their sacred buildings.

Apparently tree growth on many of their sacred sites had slowed to a halt. They read my book on paramagnetism and applied some volcanic ash to some of the trees. The trees sprang to life, and they rewarded me with this honour. The people my wife and I were introduced to at the ceremony included the Japanese royals, but we weren't even aware of it at the time.

Graeme: It's amazing, after all your work, that you still have a credibility problem in the United States.

Phil: Well, it's 17 books and 150 or so published scientific articles, but I've never been approached by a single American company to commercialise any of my projects. Mainstream

academics are constantly trying to discredit me. A colleague was recently involved in an argument about my ideas with the head of an entomology department. The guy was completely closed. Finally, my friend said, "Well, what if he's right?" The department head said, "That would be real bad." Obviously if I'm right, then there are a whole lot of people who have been wrong for a long time.

Graeme: Yes, I guess it would force them to confront their entire belief systems.

Phil: Yes, that fellow was right. It would be bad for them. I think I will receive due credit eventually; in fact, I know I will, but probably after my death—but at least it will keep my grandchildren from starving. Historians usually manage to straighten things out.

Graeme: Have figures for likely increases in paramagnetism levels been determined yet? For example, if you had a soil measuring 100 cgs and you put on five tonnes of crusher dust measuring 2,000 cgs per hectare, do you have any idea of the end gain?

Phil: No, we have been talking about that just recently. It's a new concept, and we really are at the pioneering stage. No one has done this kind of work yet, but I'm sure it won't be too far off. I mean, optimum levels may vary for different plants. There is a huge amount of research needed.

Graeme: I would suspect that there is a perfect soil that grows everything just right. In our case, that soil would have a pH of 6.3, the perfect calcium/magnesium ratio, over 5% organic matter, balanced cations, balanced anions and a functioning biology. In that perfect soil I would like to see a paramagnetic reading exceeding 500 cgs.

Phil: I would tend to agree with you. Balance is everything. I just wish there was some funding to find out more about these things.

Graeme: It will have to come from private enterprise. When there's a profit to be made, the funds will come

from everywhere. There is no great conspiracy surrounding chemical companies: they are merely chasing a profit. When demand changes focus, these same guys will sell organics. Our goal is to speed up that change.

A POWERFUL HEALING REGIMEN

Phil: That change is already happening in human health, where the big companies are now trying to grab a piece of the growing market for minerals and supplements.

Graeme: Yes, the reason that the demand for supplements and natural medicines has grown is because people have discovered that a lot of them work better than their drugs...

Phil: Well, I cured my boy's arthritis with paramagnetism. I cured my own lung cancer with this force. Lower back pain is easy to cure with it.

Graeme: Tell me about it: I've suffered lower back pain for years!

Phil: Well, my book, *Ancient Mysteries, Modern Visions*, covers this a little. One chapter is about how to make a *shatnez*. *Shatnez* is an old Hebrew word. I found out from the rabbis

[US] Midwestern farmers had eroded away their paramagnetic force in a 50-year period, while the Indians had taken 300 or 400 years to achieve the same depletion.

that the high priests used to wear this piece of cloth called a shatnez. The high priest would wrap this cloth around himself. The high priest was a doctor and he had to spend time helping the lepers. He had to have a good immune system to survive. I figured that maybe this garment is part of a healing system.

The Irish take the halter of a donkey, which is drenched in sweat, and they wrap this around arthritic joints, with great results. The cloth the priests used was woven with wool one way and linen the other way. The American pioneers called the same cloth *linsey-woolsey*. The Hebrews call it shatnez. It is arguably the best cloth ever invented. It retains moisture really well, but it also dries really quickly. If you wet it, it stays damp forever; but if you want it dry and put it in the sun, it dries in a hurry. So it makes a good cloth and it's great for soaking up sweat.

I made a vest of this material and I soaked it in seawater to mimic sweat. I found out that you don't necessarily even need linsey-woolsey. My wife made me a vest out of a burlap sack. I soaked it in seawater and wrapped it in plastic cling wrap to retain the moisture. I used to wear this damp vest over a T-shirt to keep the plastic away from my body. When I was diagnosed with lung cancer, it was the cornerstone of my own treatment regime.

I spent five years evaluating the damage done with herbicides and pesticides, and I'm sure there was a link to the cancer. Anyway, I also took garlic every day and ate a tablespoon of highly paramagnetic dirt each day. The tumour shrank and I cured myself. I also made one of these vests for my wife for her arthritis. Her persistent lower back pain disappeared in a week and a half.

Then she put it on her shoulder, which had arthritis, and it was also cured. So far I've cured 15 people with arthritis with this one vest. The last chapter of my new book is to describe how to make this vest, but I've just told you instead. There are two chapters planned for this next book: one is about the pattern for this cloth and how to make it, and the second one is about how to do it cheaper with a piece of burlap.

Graeme: When is the next book due for release?

Phil: It will have to be soon, probably six to 12 months. I have so many people asking me about this cure. It will also depend on how long it will take *Acres USA* to publish the book. [As we go to press, the book is yet to be released. Ed.]

Graeme: I look forward to it.

THE MAGIC OF PARAMAGNETISM

Graeme: Another agricultural question: if you had to short-list the four major benefits of paramagnetism in agriculture, what would they be?

Phil: Well, as I mentioned, water retention is a big one. Microbial stimulation is another, and improved nutrient utilisation is a major factor, but the provision of a light energy source is very important.

When I was working with Dr Popp on this one, he was very surprised. He had been getting coherent radiation from seeds and I had been getting it from insects, but he didn't think it would happen in rocks. When he measured the 2,000 protons that came out of a rock, not only did his proton counter show that it was coherent, but it also had a memory! In other words,

it lasted something like 20 or 30 minutes, sort of like a fluorescent lightbulb dying down.

God takes care of you. When I got to Germany, there were meetings going on everywhere at the university. Dr Popp couldn't find a graduate student to help with the research. There were two Russian scientists working there who could speak English. I don't use a computer—all my work is done with a pencil and paper—but, to speed things up, you really have to have a computer. These Russian guys dropped everything and helped me with the computer side of things. They were absolutely flabbergasted. When they saw the coherent radiation with a memory coming out of a paramagnetic rock, they were just jumping up and down like a couple of kids.

Graeme: When were you in Germany?

Phil: It was at this time that I started coughing. I thought it was a cold, but when I got home to Florida, it got worse. At first they thought it was tuberculosis, but then I was told I had lung cancer.

Graeme: How did you feel about the diagnosis?

Phil: To be honest, I really didn't worry about it. You are going to die sometime, and I have no fear of the prospect. I wanted to test my own treatment, and it worked for me. A

damp burlap vest soaked in seawater and wrapped in plastic, a teaspoon of garlic and a tablespoon of paramagnetic rock did the trick...

Graeme: Thanks for your time. I've had a great afternoon.

Phil: It's been a pleasure. I hope to see you in Australia some time.

About the Interviewee:

Philip S. Callahan, PhD, is a rare combination of scientist, natural philosopher and world traveller. He is the author of

more than 150 scientific papers and 17 books, including *Insect Behavior* (1971), *Tuning in to Nature* (1975), *Birds and How They Function* (1979), *Ancient Mysteries, Modern Visions* (1984), *Nature's Silent Music* (1992), *Exploring the Spectrum* (1994), *Paramagnetism* (1996), and *My Search for Traces of God* (1997)—a very personal memoir that describes his own spiritual development, the influence of divine guidance on his discoveries, and the physics of miraculous events (see review, NEXUS 5/06). His article, "The Invention of Wireless Communication", was published in NEXUS 7/01.

About the Interviewer:

Graeme Sait is CEO and co-founder of Queensland-based company Nutri-Tech Solutions Pty Ltd (NTS), which is now a recognised world leader in biological agriculture. NTS services 15,000 farmers, exports to 25 locations and has developed over 200 products. Graeme is also a writer and educator, responsible for the holistic NTS systems approach. He developed the highly successful Soil Therapy™ and Plant Therapy™ services. He is a sought-after speaker at seminars and conferences throughout Australia, and he recently addressed two conferences in the USA. Graeme is author of over 60 articles, and has conducted an interview series with the leaders in sustainable agriculture, which is soon to be published as a book. Visit the Nutri-Tech Solutions website at <http://www.nutri-tech.com.au>.

They were absolutely flabbergasted. When they saw the coherent radiation with a memory coming out of a paramagnetic rock, they were just jumping up and down like a couple of kids.

THE GENESIS PROJECT AND THE EDISON DEVICE

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Our Mission

The Genesis Project was created to develop quickly a viable, abundant, low-cost and totally environmentally friendly source of energy capable of immediately eliminating the world's dependence on oil, gasoline, natural gas, coal and nuclear energy at minimal cost, minimal conversion effort and without requiring people, businesses or industries to change the way they use energy.

There were three primary objectives involved in accomplishing our mission.

- First, to develop the underlying technology necessary to form the basis of the new energy source.
- Second, to create turnkey energy generation devices that utilise the technology for easy and transparent replacement of traditional forms of energy.
- Third, to advance the designs and specifications of the devices to the point where worldwide mass production and deliveries could begin within months.

Our Message

We created the Genesis technology to allow the world to view energy from a different perspective, and to prove that each one of us has the gift and power to change the world and make it a better place.

Today is only the beginning of our journey. We have given the world the gift of total freedom from the bonds of energy dependence on fossil fuels. Oil, natural gas and coal are precious resources that we can never recreate or replenish. Many of the products we use and depend on in our everyday lives require chemicals derived from oil, natural gas and coal to exist. Once these natural resources are gone, life as we know it will be gone as well.

Energy has always been as plentiful and inexpensive as water. Amazingly, it was right there in front of us all this time; we just were not looking at it that way.

With blessings, Genesis World Energy

The Science Behind Genesis

The most abundant and practical source of pure hydrogen and oxygen on the planet is ordinary water. However, previously it had not been possible to break water down into its molecular state in practical terms from an energy consumption standpoint. The process consumed more energy than could be extracted from the resulting hydrogen and oxygen gases. As an example, 1,000 watts of energy would be consumed to break down water to its molecular state, and only 900 watts of usable gas energy would be yielded from the process.

Recently, two new processes have been developed that are capable of breaking down water at lower energy consumption rates; however, those processes have proven to be costly and impractical.

One requires the use of a very specialised chemical additive on a continuous basis that is in relatively short supply. Furthermore, the chemicals left over from the process must be disposed of without contaminating the environment.

The other process is only accomplishable in highly controlled, centrally located facilities. Therefore, it would involve establishing new hydrogen and oxygen gas distribution and transportation channels from scratch.

In order to make Genesis viable, the team needed to develop the ability to break down any type of water into its basic molecular state, using a small amount of space and consuming far less energy than could be realised as a result of the process. Major scientific and technological breakthroughs were required to accomplish this.

Since the objectives of the Genesis Project were very specific and unique, the team started entirely fresh, creating every aspect of the new technology from scratch. Therefore, the conventional thinking and the technological accomplishments of other scientists and engineers did not limit the team.

Extracting Hydrogen and Oxygen from Water: The gCell Process

In common terms, the essence of the Genesis technology involves a process that excites the hydrogen and oxygen molecules contained in water and detaches them with very little electrical energy—much the way magnets with opposing polarities push away from each other. This was accomplished by creating a series of molecular-level reactions within a specialised cell—the Genesis gCell—which in appearance looks similar to a fuel cell. Within this cell, three simultaneous processes occur.



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- The first process produces electrical voltage from water passing over special catalytic reactants. This electrical voltage aids in the excitement of the hydrogen and oxygen molecules in the water.

- The second process involves a thermo-electro-catalytic reaction that results in the complete separation of the hydrogen molecules from the oxygen molecules. This yields maximum efficiency in the extraction of ultra-pure hydrogen and oxygen gas.

- During the third process, small amounts of the hydrogen and oxygen gas molecules created in the second process reattach, providing additional electrical current to subsidise the overall gas generation process.

The result of this landmark technological breakthrough is that it allows hydrogen and oxygen gas to be created from ordinary water, using only a fraction of the total resulting energy. The amount of water used to generate hydrogen and oxygen gases from this process is negligible: usually only a few ounces of water a day, much of which is ultimately recovered within the process and reused.

A single Genesis gCell stack (about the size of a small car battery), consisting of several individual gCells, is capable of producing hundreds of cubic feet of gas per day. In comparison, a typical American home located in a cold climate consumes approximately five metered cubic feet of natural gas per day.

Creating Electricity from Hydrogen and Oxygen: The eCell Process

As was the case in creating the technology for extracting hydrogen and oxygen gases efficiently, the Genesis team elected to start completely from scratch in developing its own special fuel cells. While the Genesis electrical generating cells (eCells) are in fact "fuel cells", they share very little in common with any other type of fuel cell in existence.

Using the molecular technology developed for the Genesis gas-generating gCell provided significant advantages over existing fuel cell technologies. These advantages include a low manufacturing cost, substantially higher electrical generation yields and catalytic reactant formulations that are not subject to normal degradation, providing substantially longer service life.

Utilising a reverse reactant process (similar to but less complicated than the gCell gas-generation process), hydrogen and oxygen molecules are excited and attracted to each other (much like aligned magnets pulling themselves together) and water is then recreated as a result. Substantial amounts of electricity and heat are generated as a byproduct.

The Genesis technology is so efficient that a single compact eCell stack (about the size of a gCell stack) can produce over 1,000 amps of electrical current. The electricity extracted from the eCells then replaces the electricity provided by

utility companies. Water generated from the eCells is recovered and reintroduced into the gas generation system, while heat generated during the process is converted to usable energy.

The Genesis gas and electrical generation processes are so compact and efficient that devices based on the technology are easily capable of replacing traditional forms of energy, using very little space.

Bringing It All Together: The Edison Device

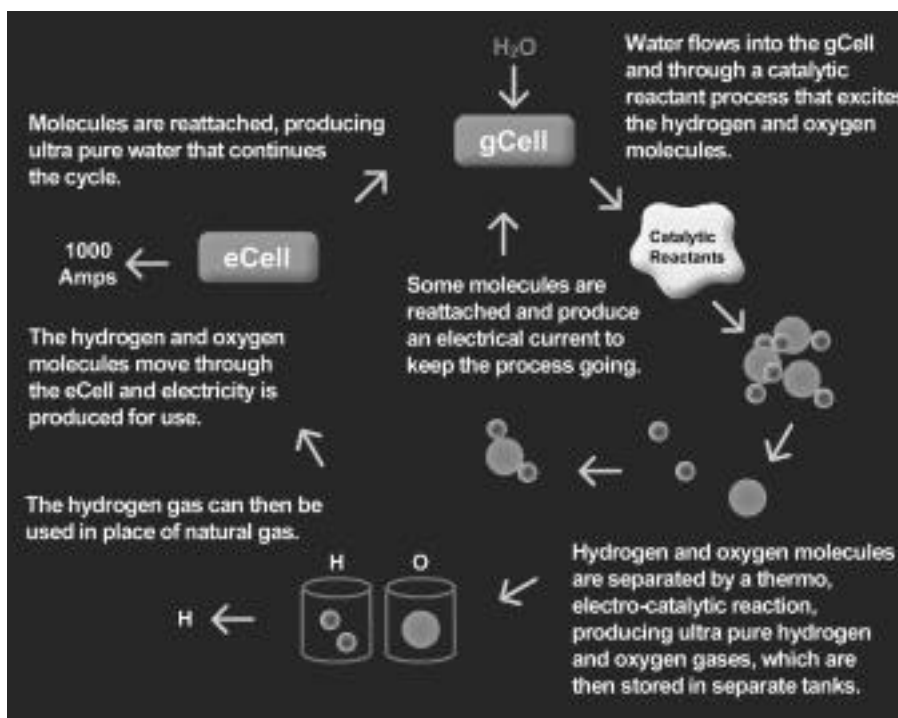
While the gCell and eCell technology is breathtaking in its simplicity, it needed to be incorporated into a mechanism that could viably meet residential and commercial energy requirements. This has been accomplished through the Edison Device: a self-contained energy generation system consisting of stacks of gCells and eCells. The Edison Device is roughly the size of a typical residential outdoor air conditioning unit.

Installing the electrical generation feature of the Edison Device to any home or business simply requires attaching three wires to existing electrical service connections, typically located in the electrical box that contains the utility company's power meter. Installing the gas-generation feature of the Edison Device simply requires connecting the device's gas feed line directly into the existing natural gas line on the customer's side of the utility company's gas meter. At that point, customers are fully independent from energy provided by utility companies. Appliances that use natural gas or propane are easily converted to use hydrogen gas by installing gas line flow restrictors; this can be accomplished simply and easily by any average do-it-yourselfer.

As a safety precaution, if a gas leak develops in a customer's appliance, the Edison Device has the ability to detect the leak and immediately shut off the gas supply until repairs can be performed. As a result, gas supplied by the Edison Device will be safer than using natural gas or propane.

Market-Ready Models

The Genesis Project has developed two market-ready models of the Edison Device: a residential version and a commercial version. The residential model is capable of producing up to 30 total kilowatts of combined gas and electrical power per day (a typical home uses



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between 5 and 6 kilowatts), and the commercial model can generate up to 100 total kilowatts of energy. For heavier commercial requirements, multiple Edison Devices can be linked together.

The design of the Edison Device has proven that less is more. The energy-generating portion of the device has no moving parts; in fact, the only "mechanical" aspects of the Edison Device are the small circulation pumps and micro-valves that control the flow of water and gases. As a result, maintenance is limited to the occasional replacement of inexpensive water filters, which can easily be accomplished by consumers themselves, while water usage is minimal over the device's projected 20+ years of service life!

Using only small amounts of water to meet residential and commercial energy requirements, producing no noise or emissions beyond the creation of ultra-pure water, and utilising an energy-generation technology that is self sustaining, the Edison Device is truly a "green machine".

The Genesis Team

Genesis World Energy is a technology development, production and supply consortium whose key members have spent much of their careers developing pivotal technologies for defence and space programs. Their contribution ranges from defending the world's nations from nuclear holocaust, to taking man to the Moon and exploring the depths of space.

In September 2000, a plan to create a new, practical source of energy out of the hydrogen and oxygen in water was put into motion. By early 2001, a team of over 400 visionaries from a wide spectrum of disciplines, including science, technology and engineering, was assembled to crack the scientific and technological breakthroughs necessary to make this technology possible. These dedicated men and women, who have very diverse ethnic, religious and political backgrounds, were able to set aside their differences for the common benefit of mankind. With a focused mission, they accomplished what no one else has: the ability to harness an unlimited source of energy from the molecular structure of water—an achievement that will change the face of energy as we know it.

But it isn't the recognition, fame or

fortune that motivated the Genesis team members to pursue this challenge. In fact, they desire to remain in the background, letting the technology receive the attention. Rather, it is their passion to make a positive difference in the world that compels them to provide the world's people with access to a low cost, abundant energy resource, to protect the Earth's natural resources from depletion and pollution, and to invest in future generations through the support of educational, environmental and charitable causes and the perpetual advancement of this technology.

Call it fate or divine inspiration, but the Genesis team knows that every aspect of this journey came together by design. From every team member and each successful milestone to the amazingly short development process, this scientific breakthrough is nothing short of a miracle.

The Genesis Project was privately funded to ensure that its goal remained outside the control of government or corporate interests.

Questions Answered

Q: How did the Genesis Project begin?

A: A 50-year-old research and development group, with past ties to Cold War technology programs, launched the Genesis Project in 2000. The Genesis Project was privately funded to ensure that its goal—the generation of clean, abundant and renewable energy from hydrogen and oxygen molecules in water—remained outside the control of government or corporate interests.

Q: Who is involved in the Genesis Project?

A: The project team was very large, consisting of more than 400 visionaries representing a wide array of scientific, technological and engineering disciplines. Working in task force groups throughout the US, team members themselves did not know the identities of

other Genesis Project members outside their own group or the totality of the project's goals. In order to retain their privacy and for reasons of confidentiality related to the protection of their intellectual property assets, the individuals involved in the Genesis Project wish to remain anonymous.

Q: Who owns Genesis technology?

A: The Genesis technology is privately owned by the individuals who created it, and they have no intention of offering equity to the public. People who wish to invest in Genesis-related technologies, may look to publicly trading corporations that receive licences.

Q: What is the reason for the secrecy surrounding the Genesis Project?

A: Because of the economic and geopolitical implications of the Genesis Project technology, every possible means of safeguarding it have been taken prior to its disclosure and the subsequent establishment of licensing agreements aimed at its proliferation. Because the technology may initially be perceived as a threat to established government and industry interests, strict security measures are being taken to keep the Genesis Project technology in the hands of free market forces.

Q: How is the Edison Device being commercialised?

A: Commercialisation of the Edison Device is the responsibility of two separate business entities. The first of these, Genesis World Energy, organised as a technology development, production and supply consortium, will further the underlying Genesis Project technology, and establish and manage a road map for future product enhancements. The responsibility for the proliferation of the Edison Device falls to World Energy Management, which acts as the exclusive licensing representative for the worldwide distribution.

Q: Are Edison Devices currently available?

A: Commercially viable versions of the Edison Device currently exist, as does the manufacturing capacity to produce and assemble devices. It is the intent, however, of the Genesis Project that full-scale assembly and distribution of the Edison Device be accomplished by licensees, rather than by Genesis World Energy or World Energy Management.

NEWSCIENCE NEWSCIENCE NEWSCIENCE

Q: How will licences for the Edison Device be distributed?

A: World Energy Management will broadly issue licences for the Edison Device on a worldwide basis to both qualifying private industries and governments. Special consideration in licensing will be given, however, to those traditional energy producing and distribution companies who will be most affected by the Edison Device technology. In all cases, licensees will have the rights to assemble, distribute, sell and service Edison Devices, but will purchase the critical technology components from Genesis World Energy.

Q: How will consumers gain access to Edison Devices?

A: Based on the licensing objectives of World Energy Management, consumers will most likely gain access to Edison Devices either by purchasing them from licensed manufacturers and assuming responsibility for their installation and maintenance, or will rent them through entities such as local utility companies, who would in turn assume responsibility for installation and maintenance.

Q: Must homes and businesses be retrofitted to use the Edison Device?

A: Not at all! Installation of an Edison Device is as simple as connecting three wires, a gas line and a garden hose. The gas-generation portion of the Edison Device installs in the customer side of a residential gas line, with inexpensive gas flow restrictors required to convert appliances from natural gas to the hydrogen gas produced by the Edison Device. The electrical portion installs quickly into the existing power box. The water required for the device's process can literally come from any source, including salt water from the ocean, rainwater and recycled water or from a simple garden hose connection.

Q: What is the life expectancy of an Edison Device?

A: Because the Edison Device has virtually no moving parts, the only parts that need routine replacement are inexpensive water filters. The life expectancy of the Edison Device is 20 years or more. Although each customer's energy needs are different, average all-electric homes may use as little as 30 gallons of water over the device's expected 20-year life cycle.

Q: When can the individual consumer purchase the device?

A: Companies and governments have 60 days to apply and qualify to obtain licences. After that, all companies and governments selected for licences will receive product design and specification packages on exactly the same day, giving each licensee the incentive to begin delivery to consumers as quickly as possible in order to establish the best possible market share. In all cases, in order for licensees to retain their licence, they must begin regular delivery to consumers within nine months after receiving their licence.

Q: Who will install and service the devices?

A: Typically, the company that sells the Edison Device directly to the consumer will also provide installation and service. Do-it-yourselfers may also elect to install and service the devices themselves. Utility companies will most likely utilise their existing service personnel to install and service the devices that they supply to customers.

New Questions Answered
(as at December 17, 2002)

Q: Does the Genesis Project technology represent perpetual motion?

A: Absolutely not. The Genesis gCell technology is based on a chemical reaction that is triggered by exposing chemicals to water and small amounts of electrical voltage and current. All of the chemicals used in the process are contained on a specially coated membrane within the gCell and are consumed over time. Once the chemicals are depleted, the system will not continue to function.

Q: How much water does the Edison Device consume?

A: That depends entirely on the type and amount of energy used by individual consumers. An average all-electric home located in the United States could consume as little as 30 gallons of water over the Edison Device's approximately 20+ years of service life. A typical US home that uses both gas and electricity would consume about as much water as a refrigerator icemaker. A large gas-heated swimming pool, depending on the size and location, could consume several gallons of water a month.

Q: Why can no one find pending or completed patent applications related to the Genesis technology in the US or foreign patent offices?

A: Simply stated, the Genesis team has elected to protect its intellectual properties and/or proprietary trade secrets, utilising different and varied mechanisms rather than those afforded through the traditional patent process.

Q: Why are some within the scientific community sceptical of the Genesis technology?

A: For security purposes, the Genesis team has elected to disclose little about the science behind the technology. In the absence of detailed information, it is not possible to understand how Genesis's stated results were achieved. Therefore, the scientific community at large will analyse the Genesis Project based on conventional thinking. The Genesis technology works and is ready to go worldwide.

Q: When will the public get to see demonstrations of the Edison Device and the Genesis technology?

A: There have been numerous demonstrations of the technology to the public. In fact, the technology was demonstrated for invited members of the public and a film crew near Boise, Idaho, on November 27, 2002, a few days before the Boise press conference [December 5]. Demonstrations have also taken place on the East and West coasts of the United States. For security purposes, the dates, times and locations of demonstrations are always kept secret, and individuals attending the demonstrations must sign strict confidentiality agreements. Once licensees have been selected and licences awarded, each licensee will be free to demonstrate the technology for the public at will.

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Editor's Notes:

This article on the Genesis Project was downloaded and slightly edited from the Genesis World Energy website at <http://www.genesisworldenergy.org>.

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DARWINISM

A CRUMBLING THEORY

Humanity did not evolve from monkeys or apes but, like them, either arrived on Earth intact or developed here as a result of extraterrestrial intervention.

Part 2 of 2

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HUMAN ORIGINS: CAN WE HANDLE THE TRUTH?

In Part One of this essay, I explained the Interventionist perspective regarding the origin of life on Earth. I showed how the great preponderance of evidence indicates life *came* here and did not *develop* here, as we have been brainwashed to believe by generations of scientists struggling to keep the creation myths of religion out of classrooms. Personally, I applaud and support all efforts to keep the most specious aspects of Creationism safely bottled up in houses of worship, where they belong. However, I have even more disdain for scientists who allow themselves to be crushed to cowardly pulp by nothing more debilitating than "peer pressure". Because both groups are so driven by their collective fears and dogma, neither has a working grip on reality. That becomes increasingly clear as research continues, which I believe was made evident in Part One. Now let's try to do the same in Part Two, on human origins.

If anything riles Creationists and Darwinists alike, it's the suggestion they might be wrong about how we humans have come to dominate our planet so thoroughly. Both sides can tolerate substantial criticisms regarding the wide array of subjects under their purviews, including the kind of critique I gave the origins of life in Part One. However, they have *no* toleration for challenges to their shared hegemony over the beginnings of us all. Dare that and you'll find yourself in a serious fight. Thus, those of us who support the Interventionist interpretation come under attack from both sides, not to mention the other clique at the party, the educated subgroup of Creationists known as Intelligent Designers (a brilliant choice of name that enforces their bottom-line concept of a "grand designer", while simultaneously implying they are smarter than anyone who would oppose them).

All sides seem to agree that humans are "special". Creationists and Intelligent Designers consider it virtually self-evident that humans originated by some kind of divine fiat. Creationists believe the instigator is a universal "godhead" figure, which IDers water down to a more palatable "entity or system" capable of generating order out of chaos, life out of the inanimate. Even Darwinists will concede that many of our physical, emotional and intellectual traits set us far apart from the primate ancestors they believe preceded us in the biological process of evolution. However, despite our high degree of "specialness", Darwinists fervently promote the dogma that even the most fanciful distinctions separating us from our supposed ancestors can be explained entirely by "natural means".

As with the early life-forms discussed in Part One, there's nothing natural about it.

THE EARLIEST PRIMATES

Darwinists believe the human saga begins with mouse-sized mammals called *insectivores* (similar to modern tree shrews) that scurried around under the feet of large dinosaurs, trying to avoid becoming food for smaller species. Then comes the Cretaceous extinction event of 65 million years ago that took out the dinosaurs and paved the way for those tiny insectivores to evolve over the next few million years into the earliest primates, the prosimians (literally *pre-simians*, pre-monkeys) of the early Palaeocene epoch, which lasts until 55 million years ago.

As with nearly all such aspects of Darwinist dogma, this is pure speculation. There is, in fact, *no* clear indication of a transitional insectivore-to-prosimian species at any point in the process. If any such transitional species had *ever* been found, then countless more would be known and I wouldn't be writing this essay. Darwinian evolution would be proved beyond doubt, and that would be the end of it.

To read the fossil record literally is to discover the legitimacy of *punctuated equilibrium* (discussed in Part One) as a plausible explanation. "Punk eek", as detractors call it, points out that in the fossil record life-forms *do* seem simply to appear on Earth, most often after extinction events but not always. Both the supposed proto-primates and flowering plants appear during the period *preceding* the Cretaceous extinction. They come when they come, so the relatively sudden post-extinction appearance of the earliest primates, the prosimians (lemurs, lorises, tarsiers), is one of many sudden manifestations.

In terms of human origins, it begs this question: did proto-primates actually *evolve* into prosimians, into monkeys, into apes, into humans? Or did prosimians appear, monkeys *appear*, apes *appear*, and humans *appear*? Or, in our "special" case, were we created?

However it happened, there is a pattern. The earliest prosimians are found in the fossil record after the Mesozoic/Cenozoic boundary at 65 million years ago. It is *assumed* their ancestors will someday be found as one of countless "missing links" needed to make an airtight case for Darwinian evolution. Prosimians dominate through the Palaeocene and the Eocene, lasting from 65 to 35 million years ago. (There won't be a test on terms or dates, so don't worry about memorising them; just try to keep the time-flow in mind.) At 35 million years ago, the Oligocene epoch begins and the first monkeys come with it.

Again, Science *assumes* that monkeys evolved from prosimians, even though evidence of that transition is nowhere in sight. In fact, there is strong evidence pointing in the other direction, toward the dreaded *stasis* of punctuated equilibrium. The lemurs, lorises and tarsiers of today are essentially just as they were 50 million years ago. Some species have gone extinct while others have modified into new forms, but lemurs and lorises still have wet noses and tarsiers still have dry, which seems always to have been the case. That's why tarsiers are assumed to be responsible for spinning off monkeys and all the rest.

Monkeys start appearing at 35 million years ago, looking vastly different from prosimians. There are certain physiological links, to be sure, such as grasping hands and feet to permit easy movement through trees. However, prosimians cling and jump to move around, while monkeys favour brachiating—swinging along by their arms. Also, prosimians live far more by their sense of smell than do monkeys. This list goes on.

The reason they're linked in an evolutionary flowchart is because they seem close enough in enough ways to make the linkage stick. Simple as that. Science focuses on the similarities and tries hard to ignore their gaping discrepancies, assuming—as always—that there is plenty of time for evolution to do its magic and generate those inexplicable differences.

For the next 10 million years the larger, stronger, more "advanced" monkeys compete with prosimians for arboreal resources, quickly gaining the upper hand over their "ancestors" and driving several of them to extinction.

Then, at around 25 million years ago, the Miocene epoch brings the first apes into the fossil record, as suddenly and

inexplicably as all other primates appear. Again, Science *insists* they evolved from monkeys, but the evidence to support that claim is as specious as the prosimian-monkey link. The transitional bones needed to support it are simply *not* in the fossil record.

If this isn't a distinct pattern of punctuated equilibrium, then what is?

THE PUZZLING MIOCENE

In terms of primate evolution, the Miocene makes little sense. By 25 million years ago, when it begins, prosimians have been around for about 30 million years and monkeys for 10 million years. Yet in the Miocene's ample fossil record, prosimians and monkeys are rare, while the new arrivals, the apes, are all over the place.

The Miocene epoch stretches from 25 million to 5.0 million years ago. (These are approximations quoted differently in various sources; I round off to the easiest numbers to keep track of.) During those 20 million years, the apes flourish. They produce two-dozen different genera (types), and many have more than one species within the genus. Those apes come in the same range of sizes they exhibit today, from smallish gibbon-like creatures, to mid-range chimp-sized ones, to large gorilla-sized ones, to super-sized *Gigantopithecus*,

known only by many teeth and a few mandibles (jawbones) from India and China.

That's another interesting thing about Miocene apes: their fossils are found literally everywhere in the Old World—Africa, Europe, Asia. Most of them are known by the durable teeth and jaws that define *Gigantopithecus*, while many others supply enough post-cranial (below the head) bones to grant a reasonably clear image of them. They present an interesting mix of anatomical features. Actually, "confusing" is more like it. They are clearly dif-

ferent from monkeys in that they have no tails, just like modern apes. However, their arms tend to be more like monkey arms—the same length as their legs. Modern ape arms are significantly longer than their legs so they can "walk" comfortably on their front knuckles. More than any other reason, this is why we hear so little from anthropologists about Miocene apes. Their arms don't make sense as the forelimbs of an ancestral quadruped. Miocene arms fit better with...something else.

This is not to say, of course, that *no* ape arms in the Miocene fossil record are longer than legs. That's nowhere near to being determined because many species—like *Gigantopithecus*—have yet to provide their arm bones. However, since we *do* have some tailless, ape-like bodies with monkey-like arms and hands, we have to consider how such a hybrid would move around. Swing through trees by its arms, like a monkey? Not likely. Monkey arms are designed to carry a monkey's slight body. An ape's body needs to be brachiated and leveraged by an ape's much longer, stouter, stronger arms. So how about...*walking*?

From a physiological standpoint, an ape-like body with monkey-like arms and hands does not move as easily or comfortably as a quadruped (down on all fours). It simply can't happen. In fact, there's really only one posture that lends itself to the carriage of such a monkey-ape hybrid, and that's

Science assumes that monkeys evolved from prosimians, even though evidence of that transition is nowhere in sight.

upright. Go to a zoo and watch how much easier monkeys—tails and all—stand upright compared to apes. Any monkey can move with grace on its hind legs. In comparison, apes are blundering, top-heavy oafs. Thus, it seems likely that at least some of the hybrid monkey-apes of the Miocene probably had to carry themselves upright, in opposition to the other apes of the era bearing the longer, thicker arms of gibbons, orangutans, chimpanzees and gorillas. Remember, we're talking about two dozen genera and around 50 species.

WALKING THE WALK

Walking is critical to an understanding of human origins because Darwinists feel it is *the* factor that set our ancestors on the road to becoming us. The theory is that around 5.0 to 10 million years ago, when the heavy forests blanketing Africa began shrinking, some forest-dwelling quadrupedal Miocene apes still living then (there had been the inevitable extinctions and speciations during the preceding 15 to 20 million years) began to forage on the newly forming savannas. Though terribly ill-equipped to undertake such a journey (more about that later), several ape species supposedly took the risk by learning to stand upright to see out over the savanna grasses to scout for predators. Then—after millennia of holding that position for extended periods—they adopted constant upright posture. In doing so, one of those daring, unknown species took the *real* "giant step for mankind".

No one can yet say which of the early upright-walking "pre-humans" went on to become us, because the physiological gaps between us and them are simply enormous. In fact, physically, the only significant thing we have in common with those early ancestors is upright posture. But even that reveals noticeable divergence.

Incredibly, we have the walking trail of at least two early pre-humans at 3.5 million years ago. Found in Laetoli, Tanzania, these tracks were laid down on a volcanic ash fall that was then covered by another ash fall and sealed until their discovery by Mary Leakey's team in 1978. Photos of that trail are common and can be accessed in any basic anthropology textbook or on the Internet. What is not commonly portrayed, however, is that detailed analysis of the pressure points along the surface of those prints indicates something that would be expected: they didn't walk like us. After all, 3.5 million years is a long time, and from a Darwinist standpoint it's logical to assume extensive evolution would occur. But whether it was evolution or not, our methods of locomotion are uniquely different.

Humans have a distinctive carriage that starts with a heel strike necessitated by our ankles placed well behind the mid-point of our feet. After the heel strike, our forward momentum is swung to the left or right, out to the edges of our feet to avoid our arches (in normal feet, of course). Once past the arch, there's a sharp swing of the momentum through the ball of the foot from outside all the way to the inside, where momentum is gathered and regenerated in the powerful thrust of the big toe, with the four small toes drawing themselves up

to act as balancers. (Watch your own bare feet when you take a step and you'll see those final "thrust-off" stages in action.)

The pre-humans at Laetoli walked with marked differences. Instead of having a heavy heel-strike leading the way, their ankle was positioned at the centre balance point of the foot, allowing it to come down virtually flat with an almost equal distribution of weight and momentum between the heel and the ball area. Instead of a crazy momentum swing out and around the arch, their arches were much smaller and the line of momentum travelled nearly straight along the midline of the entire foot. That made for a much more stable platform for planting the foot and toeing off into the next step, which was done by generating thrust with the entire ball area rather than with just the big toe. When you get right down to it, the Laetoli stride was a superior technique to the one we utilise now.

Slow-motion studies of humans walking show that we do virtually everything "wrong". Our "heel-strike, toe-off" causes a discombobulation that courses up our entire body. We are forced to lock our knees to handle the torque as our momentum swings out and around our arches. Because of that sus-

pending moment of torque absorption, we basically have to fall forward with each step, which is absorbed by our hip joints. Meanwhile, balance is assisted by swinging our arms. Because of those factors, we don't walk with anything approaching optimum efficiency, and the stresses created in us work, over time, to deteriorate our joints and eventually cripple us. In short, we could use a re-design.

What we actually need to do is to walk more like the pre-humans at Laetoli. In order to secure that heel-and-toe plant with each step, we'd have to modify our stride so our knees weren't locked and we weren't throwing ourselves forward through our hip joints. We'd have to keep our knees in a state of continual flexion, however slight, absorbing all the stress of walking in our thighs and buttocks, which both are designed to accommodate. This would provide us with a "gliding" kind of stride that might look unusual (it would resemble the classic Groucho Marx bent-kneed comedic walk), but would actually be much less stressful, much less tiring and incredibly more efficient physiologically.

Based on the evidence of the Laetoli tracks, this is exactly how they walked.

Only when the Cro-Magnons appear, as suddenly and inexplicably as everything else, at around 120,000 years ago in the fossil record, do we see beings that are unmistakably human.

WHAT'S WRONG WITH THIS PICTURE?

When Darwinists present reconstructions of so-called "pre-humans", invariably they look nothing *like* humans.

Lucy and her *Australopithecus* relatives were little more than upright-walking chimpanzees. The robust australopithecines were bipedal gorillas. The genus *Homo* (*habilis*, *erectus*, Neanderthals and other debatable species) was a distinct upgrade, but still nowhere near the ballpark of humanity. Only when the Cro-Magnons appear, as suddenly and inexplicably as everything else, at around 120,000 years ago in the fossil record, do we see beings that are unmistakably human.

The Laetoli walkers lived 3.5 million years ago. Lucy lived

around 3.2 million years ago. Recent discoveries show signs of pushing bipedal locomotion back as far as 6.0 million years ago. So let's assume for the sake of discussion that *some* primates were upright at no less than 4.0 million years ago.

Thus, from approximately 4.0 million years ago all the way to the appearance of Cro-Magnons some time before 120,000 years ago (95% of the journey), all pre-human fossils reveal distinctly *non*-human characteristics. They have thick, robust bones—much thicker and more robust than ours. Such thick bones are necessary to support the stress generated by extraordinarily powerful muscles, far more powerful than ours. Their arms are longer than ours, especially from shoulder to elbow. Their arms are also roughly the same length as their legs, *à la* Miocene apes. And in every aspect that can be quantified—every one!—their skulls are much more ape-like than human-like. Those differences hold from australopithecine bones to the bones of Neanderthals—which means that something quite dramatic happened to produce the Cro-Magnons, and it wasn't the result of an extinction event. It was...something else.

The chasm between Cro-Magnons (us) and everything else that comes before them is so incredibly wide and deep that there is no way legitimately to connect the two, apart from linking their bipedal locomotion. All of the so-called "pre-humans" are much more like upright-walking chimps or upright-walking gorillas than they are incipient humans. Darwinists argue that this is why they are called *pre*-humans, because they are so clearly *not* human.

But another interpretation can be put on the fossil record—one that fairly and impartially judges the facts as they exist, without the "spin" required by Darwinist dogma. That spin says that the gaping physiological chasm between Neanderthals and Cro-Magnons can be plausibly explained with yet another "missing link".

LOOKING BACK TO SEE AHEAD

Darwinists use the missing link to negate the fact that Cro-Magnons appear out of nowhere, looking nothing like anything that has come before. What they fail to mention is that *dozens* of such links would be needed to show any kind of plausible transition from *any* pre-human to Cro-Magnons. It clearly didn't happen—and since they're experts about such things, they *know* it didn't happen. However, to acknowledge *that* would play right into the desperate hands of Creationists and Intelligent Designers, not to mention give strong support to Interventionists like me. They face a very big rock or a very hard place.

Let's accept for the moment that in Darwinian terms there is no way to account for the sudden appearance of Cro-Magnons (humans) on planet Earth. If that is true, then what about the so-called "pre-humans"? What are they the ancestors of? Their bones litter the fossil record looking very unlike humans, yet they clearly walk upright for at least 4.0 million years, and new finds threaten to push that back to 6.0 million years. Even more likely is that among the 50 or more species of Miocene

apes, at least a few are walking upright as far back as 10 to 15 million years ago. If we accept that likelihood, we finally make sense of the deep past while beginning for the first time to see ourselves clearly.

We can be sure that at least four of the 50 Miocene apes were on their way to becoming modern quadrupeds, because their descendants live among us today. Equally certain is that others of those 50 walked out of the Miocene on two legs. Technically these are called *hominoids*, which are human-like beings that are clearly *not* human. In fact, every bipedal fossil preceding Cro-Magnon is considered a hominoid—a term that sounds distinctly outside the human lineage. So Darwinists have replaced it in common usage with the much less specific "pre-human", which not so subtly brainwashes us all into believing there is no doubt about that connection. And that brainwashing works.

We are further brainwashed to believe there are no bipedal apes alive in the world today, despite hundreds of sightings and/or encounters with such bipedal apes every year on every continent except Antarctica. Darwinists brainwash us to ignore such reports by showering them with ridicule. They call such creatures "impossible", and hope the weight of their credentials can hold reality at bay long enough for them to figure out what to do about the public relations catastrophe they will face when the first hominoid is brought onto the world stage—dead or alive. That will be the darkest day in Darwinist history, because their long charade will be officially over. The truth will finally be undeniable. Bigfoot, the Abominable Snowman and several relatives are absolutely real.

IF THE SHOE FITS...

I'm not going to waste time and space here going over the mountain of evidence that is available in support of hominoid reality. I cover it extensively in the third part of my book, *Everything You Know Is Wrong*, and there are many other books that cover one or more aspects of the subject. If you care to inform yourself about the reality of hominoids, you won't have any trouble doing so. And the evidence is solid enough to hold up in any court in the world, except the court of public opinion manipulated by terrified Darwinists. However, I will go over a few points that bear directly on the question of human origins.

Let's grant a fairly obvious assumption: that the thousands of ordinary people who have described hominoid sightings and encounters over the past few hundred years (yes, they go back that far in the literature) were in fact seeing living creatures rather than Miocene ghosts. And no matter where on Earth witnesses come from, no matter how far from the beaten path of education and/or modern communications, they describe what they see with amazing consistency. To hear witnesses tell it, the same kinds of creatures exist in every heavily forested or canopied environment on the planet—which is precisely what we would expect if they did indeed stride out of the Miocene epoch on two legs.

Furthermore, what witnesses describe is exactly what we

The chasm between Cro-Magnons (us) and everything else that comes before them is so incredibly wide and deep that there is no way legitimately to connect the two, apart from linking their bipedal locomotion.

would expect of upright-walking apes. They are invariably described as having a robust, muscular body covered with hair, atop which sits a head with astonishingly ape-like features. In short, the living hominoids are described as having bodies we would expect to find wrapped around the bones found in the so-called "pre-human" fossil record. In addition, witnesses describe what they see as having longer arms than human arms, hanging down near their knees, which means those arms are approximately the length of their legs. Witnesses also contend that the creatures walk with a "gliding" kind of bent-kneed stride that leaves tracks eerily reminiscent of the tracks left at Laetoli 3.5 million years ago.

Now we come to the crux for Darwinists, Creationists and Intelligent Designers. Evidence supporting the reality of hominoids is overwhelming. Truly. And if they *are* real, it means the "pre-human" fossil record is actually a record of *their* ancestors, not ours. And if that's the case, then humans have no place on the flowchart of life on Earth. And if that's true, then it's equally clear that humans *did not* evolve and *could not* have evolved here the way Darwinists claim. And if we didn't evolve here, that opens the door to the Interventionist position that *nothing* evolved here: everything was brought or created by sentient off-world beings whom I call *terraformers*, whose means and motivation will remain unknown to us unless and until they see fit to explain themselves. I hope no one is holding their breath.

The point is that the Miocene epoch had the means to produce living hominoids—50 or more different species (which almost certainly will be shaved down to perhaps a dozen as more complete bodies are found) as far back as 20 million years ago. It produced some with monkey-like arms better suited to an upright walker than a brachiating tree-dweller or knuckle walker.

By the time it ended, 5.0 million years ago, a half-dozen or more bipedal apes were on the Earth, which we know from the ape-like australopithecine and early *Homo* fossils. And we know from Laetoli that they had a walking pattern distinct from humans, which modern witnesses describe as still being the way hominoids walk. In short, they've followed the punctuated equilibrium pattern of long-term *stasis*.

SO WHAT ABOUT HUMANS?

Humans simply do not fit the pattern of primate development on Earth. Notice the word *development* instead of *evolution*. Species that appear here do undergo changes in morphology over time. It's called *microevolution*, because it describes changes in body parts. Darwinists use the undeniable reality of microevolution to extrapolate the reality of *macroevolution*, which is change at the species-into-more-advanced-species level. That is blatantly *not* evident in the fossil record, especially when it comes to human physiology.

We have shown, I hope, that humans have been shoehorned by Darwinists into having a place in the fossil record that doesn't belong to them but to living hominoids (Bigfoot, etc.). Furthermore, humans have been shoehorned into being primates, when there is little about them—certainly nothing of significance—that fits the classic primate pattern. In fact, if it weren't for the desperate need of Darwinists to keep humans

closely linked to the primate line, we would have had our own appellation long ago—and we'll surely have it once the truth is out from the Pandora's box of Darwinist deception.

Relatively speaking, primate bones are much thicker and heavier than human bones. Primate muscles are five to 10 times stronger than ours. (Anyone who's dealt with monkeys knows how amazingly strong they are for their size.) Primate skin is covered with long, thick, visible hair. Ours is largely invisible. Primate hair is thick on the back, thin on the front. Ours is switched the other way around. Primates have large, round eyes capable of seeing at night. Compared to theirs, we have greatly reduced night vision. Primates have small, relatively "simple" brains compared to ours. They lack the ability to modulate sound into speech. Primate sexuality is based on an oestrus cycle in females (though some, like bonobo chimps, have plenty of sex when not in oestrus). In human females, the effects of oestrus are greatly diminished.

This list could go on to cite many more areas of difference, but all of them are overshadowed by the Big Kahuna of primate/human difference: all primates have 48 chromosomes, while humans have "only" 46 chromosomes. Two entire

chromosomes represent a heck of a lot of DNA removed from the human genome, yet somehow that removal made us "superior" in countless ways. It doesn't make sense. Nor does the fact that even with two whole chromosomes missing from our genome, we share what is now believed to be 95% of the chimp genome and around 90% of the gorilla genome. How can those numbers be made to reconcile? They can't.

Something is wrong here. Someone has been cooking the genetic books.

All primates have
48 chromosomes, while
humans have "only"
46 chromosomes.

THE STUFF OF LIFE

In the wild, plants and animals tend to breed remarkably true to their species. That's why *stasis* is the dominant characteristic of life on Earth. Species appear and stay essentially the same (apart from the superficial changes of microevolution) until they go extinct for whatever reason (catastrophe, inability to compete for resources effectively, etc.). When "faulty" examples appear, they're nearly always unable to put the fault into their species' collective gene pool. A negative mutation that doesn't kill the individual it appears in is unlikely to be passed along to posterity, despite Darwinist assertions that this is precisely how evolution occurs. All genomes have hard-wired checks and balances *against* significant changes of *any* kind, which is why *stasis* has been the hallmark of all life since beginning here. Aberrant examples are efficiently weeded out, either early in the reproductive process or soon after reproduction (birth). Faulty copies are deleted.

This deletion of faults holds true in the vast majority of species. Most genomes are—and stay—remarkably clear of gene-based defects. All species are susceptible to mistakes in the reproductive process, such as sperm/egg misconnections. In mammals, this produces spontaneous abortions, stillbirths or live-birth defects. However, there are precious few defects that swim in the gene pools of any "wild" or "natural" species. The only places we find significant, species-wide genetic defects are in *domesticated* plants and animals, and in those they can be—and often are—numerous.

Domesticated plants and animals clearly seem to have been genetically created by "outside intervention" at some point in the distant past. (For those interested in learning more about this, I discuss it in considerable detail in NEXUS 9/04.) Domesticated species have so many points of divergence from wild/natural species, it's not realistic to consider them in any kind of relative context. As we've seen above, the same holds true for humans and the primates we supposedly evolved from. They're apples and oranges.

We humans have over 4,000 genetic defects spread throughout our common gene pool. Think about that. No other species comes close. And yet, our mitochondrial DNA proves we have existed as a species for "only" about 200,000 years. Remember the first Cro-Magnon fossils showing up in strata 120,000 years old? That fits well with the origin of a small proto-group at around 200,000 years ago. (There will almost certainly be Cro-Magnon fossils found prior to 120,000 years ago, but it is unlikely they were dispersed widely enough to have left fossils near the 200,000-year mark. Naturally, the very first one *could* have been fossilised, but that's not the way to bet. Fossilisation is quite rare.)

All that being the case, how did over 4,000 genetic defects work their way into the human gene pool, when such genome-wide defects are rare to nonexistent in wild or natural species? (Remember, Darwin himself noticed that humans are very much like domesticated animals in many of our physical and biological traits.) It can only have occurred if the very first members (no more than a handful of breeding pairs) had the entire package of faults within their genome. That's the only way Eskimos and Watusis and all the rest of humanity can express the exact same genetic disorders.

If we descended from apes, as Darwinists insist, then apes should have a very large number of our genetic defects. They do not. If, on the other hand, we've been genetically unique for only 200,000 years, then the only way those defects could be with us is if they were *put into* our gene pool by the genetic manipulation of the founding generation of our species, and the mistakes made in that process were left in place to be handed down to posterity. And, as might be expected, this is also how domesticated plants and animals came to have their own inordinate numbers of genetic defects. It simply couldn't happen any other way.

THE FINAL NAIL...

When Einstein was asked in reference to relativity, "How did you do it?", he replied, "I ignored an axiom." This is what everyone must do if we are to get anywhere near the truth about human origins.

Darwinists ask us to believe a theory based on this axiom: "There are good grounds to believe our early ancestors lived in forests. There are equally good grounds to believe our later ancestors lived by hunting game on African savannas. Therefore, we can assume that somehow, some way, we went from living in forests to living on the savannas." The trick, for Darwinists, is in explaining it plausibly.

Savanna theorists ask us to believe that, 5.0 to 10 million years ago, several groups of forest-dwelling Miocene apes were squeezed by environmental pressures to venture out onto

the encroaching savannas to begin making their collective living. This means they had to rise from the assumed quadrupedal posture attributed to all Miocene apes to walk and run on two legs, thus giving up the ease and rapidity of moving on all fours. Those early groups had to make their way with unmodified pelvises, inappropriate single-arched spines, absurdly under-muscled thighs and buttocks, and heads stuck on at the wrong angle, and all the while doggedly shuffling along on the sides of long-toed, ill-adapted feet, thereby becoming plodding skin-bags of snack-treats for savanna predators. If any harebrained scheme ever deserved a re-think by its originator(s), this would be the one.

Of course, the *real* re-think needs to be done by Darwinists, because it is glaringly obvious that no forest-bound species of ape could have ventured onto the savanna as a stumbling, bumbling walker and learned to do it better out there among the big cats. If a collective group had been unfit for erect movement on the savanna, they wouldn't have gone. If they *did* go, they couldn't and wouldn't stay. Even primates are smarter than that. And understand, there are primates that *did* make the move onto the savanna, albeit always remaining within range of a high-speed scurry into nearby trees. Baboons are the most successful of this small group, all of which have retained quadrupedal locomotion.

In addition to the forest-to-savanna transition, Darwinists face numerous other improbable—if not impossible—differences between humans and terrestrial primates. In addition to bipedalism and the genetic discrepancies already addressed, there are major differences in skin and the adipose tissue (fat) beneath it; in sweat glands, in blood, in tears, in sex organs, in brain size and function, and on and on and on. This is a very long list that can be examined in much fuller detail in the work of a brilliant, determined researcher into

human origins, named Elaine Morgan.

Ms Morgan is the chief proponent of what challenged Darwinists derisively call "the Aquatic Ape theory", as if the juxtaposition of those disparate words were enough to dismiss it as an absurd notion. Nothing could be further from the truth. In books like *The Scars of Evolution* (Souvenir Press, London, 1990), she makes a devastating case against the notion that humans evolved from forest-dwelling apes that moved out onto the savannas. She believes humans must have gone through an extended period of development in and around water to generate the bizarre array of physiological oddities we exhibit relative to the primates we supposedly evolved from.

However, despite all her wonderfully creative work, Ms Morgan remains wedded to the Darwinist concept of evolution, which had to play itself out in only the 200,000 years dictated by our mitochondrial DNA.

MAKING SENSE OF THE INSENSIBLE

The pieces of the puzzle are on the table. The answer is there for anyone to see. But rearranging those pieces properly is no easy task, and it is even more difficult to get dogmatists of any stripe to look at the picture in a light different from their own. That has been my purpose in writing these two

We humans have over 4,000 genetic defects spread throughout our common gene pool. Think about that. No other species comes close.

Continued on page 76

LOST SECRETS OF THE SACRED ARK

Recent findings about the exotic properties of monatomic gold and the platinum group metals are rediscoveries of an advanced science understood or at least known by the ancient Mesopotamian, Egyptian and Israelite priests.

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Throughout the past century, and especially since the days of Albert Einstein, scientists have been searching for the Holy Grail of modern physics, which they classify as a "Unified Theory of Everything". This has led to some amazing discoveries and the emergence of a whole new language, which includes superstrings, quarks and superconductivity, along with an awareness of hitherto unknown planes of existence beyond our own familiar space-time.

In the field of quantum mechanics, scientists have recently confirmed that matter can indeed be in two places at once. It is now established that, through quantum entanglement, particles millions of light-years apart can be connected without physical contact. Space-time can now be manipulated, teleportation is becoming a reality, gravity-resistant material is heralded for air transport, and virtual science has led to a greater understanding of hyper-dimensional environments.

When discussing the attributes of monatomic gold and the platinum group metals in *Genesis of the Grail Kings*, I remarked that it would not be long before the potential of these noble metals was announced for environment-friendly fuel cells. These, I suggested, would supersede fossil fuels for transportation and other practical purposes. At the same time, I touched on their future use in the medical arena, particularly in the field of cancer treatment. More especially, we looked at the gravity-defying attributes of these exotic white-powder substances and at their abilities to superconduct and literally bend space-time.

The truly astonishing fact about the enigmatic white powder of high-spin gold and platinum group metals is that it is not actually a new discovery. The ancient Mesopotamians called it *shem-an-na* and the Egyptians described it as *mfkzt* (vowels are omitted in the hieroglyph translation), while the Alexandrians venerated it as a gift from Paradise and later chemists such as Nicolas Flamel called it the Philosophers' Stone.

At all stages of its history, the sacred "powder of projection" was reckoned to have extraordinary powers of levitation, transmutation and teleportation. It was said to produce brilliant light and deadly rays, while at the same time being a key to active physical longevity. In today's world, the Institute for Advanced Studies (Austin, Texas, USA) has described the substance as "exotic matter", and superconductivity (one of its primary characteristics) has been claimed by the Center for Advanced Study (University of Illinois, USA) as "the most remarkable physical property in the universe".

It is clear, however, from the documentary evidence of ancient times, that the attributes of superconductors and gravity defiance were known, even if not understood, in a distant world of priestly levitation, godly communication and the phenomenal power of the *electricus*. In Greek mythology the quest for the secret of this substance was at the heart of the Golden Fleece legend, while in biblical terms it was the mystical realm of the Ark of the Covenant—the golden coffer which Moses brought out of Sinai and was later housed in the Temple of Jerusalem.

Irrespective of all this, the earliest historical record of *mfkzt* powder is probably the most telling of all. It appears in a very specific guise in the Egyptian Pyramid Texts—sacred writings which adorn the 5th-dynasty pyramid tomb of King Unas at Saqqara. Here is described the locality in which the King is said to live forever with the gods, and it is called the Field of Mfkzt—an ethereal location associated with an otherworldly dimension called the Field of the Blessed.

Given that mysterious processes concerning gold have an alchemical ring about them, and since the monatomic powder of projection, although made from noble metals, is classified as a "stone", let us consider the writings of the 17th-century alchemist Eirenaeus Philaethes. This renowned British philosopher—revered by Isaac Newton, Robert

Boyle, Elias Ashmole and others of his day—produced a work in 1667 entitled *Secrets Revealed*. In this treatise, he discussed the nature of the Philosophers' Stone, which was commonly thought to transmute base metal into gold. Setting the record straight, Philalethes made the point that the Stone was itself made of gold, and that the Philosophers' art was in perfecting this process:

Our Stone is nothing but gold digested to the highest degree of purity and subtle fixation... Our gold, no longer vulgar, is the ultimate goal of Nature.

In another treatise entitled *A Brief Guide to the Celestial Ruby*, Philalethes pronounced:

It is called a Stone by virtue of its fixed nature; it resists the action of fire as successfully as any stone. In species it is gold, more purer [sic] than the purest; it is fixed and incom-bustible like a stone, but its appearance is that of a very fine powder.

Some time earlier, in the 15th century, the French alchemist Nicolas Flamel wrote in his *Last Testament*, dated 22 November 1416, that when the noble metal was perfectly dried and digested it made a fine "powder of gold", which is the Philosophers' Stone.

The Light of the Ancient World

Returning to ancient Egypt, we find further references to *mfkzt* at various sacred locations. One of these relates to the treasures of Pharaoh Tuthmosis III, as reproduced in a bas-relief at the Temple of Karnak. In the metals section, there are a number of cone-shaped objects. They are explained as being made of gold, but carry the rather odd description, "white bread".

It was at Karnak where, in about 1450 BC, Pharaoh Tuthmosis III founded his metallurgical fraternity of Master Craftsmen, with 39 members on the High Council. They were called the Great White Brotherhood—a name which, it was said, derived from their preoccupation with a mysterious white powder of projection.

The powder features again in an Alexandrian document called the *Iter Alexandri ad Paradisum*. This is an old parable of Alexander the Great's journey to Paradise: the kingdom of Ahura Mazda, the Persian god of light. The account features the enchanted Paradise Stone, which had numerous magical properties and was said to outweigh its own quantity of gold—although, when transposed to a powder, even a feather could tip the scales against it!

The powder's association with light was discovered again by the archaeologist Sir William Flinders Petrie in 1904. Researching the mountain wilderness of Sinai for the Egypt Exploration Fund, he discovered a hitherto unknown Egyptian temple at the summit of Mount Serâbît (better known as Mount Horeb, from the Bible account of Moses and the Ark of the Covenant). Here in this complex of halls and shrines, there were numerous inscriptions relating to *mfkzt*, accompanying a variety of hieroglyphs for light. Also, in line with the Karnak reliefs, presentations of conical bread-cakes were apparent in the Serâbît wall carvings. One of these was a representation of Tuthmosis IV in the presence of the goddess Hathor. Before him were two offering-stands topped with lotus flowers, and behind him a man bearing a conical object described as "white bread".

Another relief portrays the treasurer, Sobekhotep, presenting a conical loaf to Pharaoh Amenhotep III. In this respect, however, Sobekhotep is described as "He who brought the noble and precious stone to his majesty", and he is called "The Great One over the secrets of the House of Gold".

In all cases where the *mfkzt* powder of projection is allied to gold, bread and light and classified as a "stone", it is also related to fire. Interestingly, these things are all brought together in the Old Testament book of Job, which states (28:5–6):

As for the earth, out of it cometh bread; and under it is turned up as it were fire. The stones of it are the place of sapphires, and it hath the dust of gold.

Another biblical text, from the book of Exodus, discusses this mysterious combination—but in a form which moves one step nearer to the "bread" connotation by describing the white powder as a type of food. It appears in the story of Moses and the Israelites at Mount Horeb in Sinai, when Moses is disturbed to find that his brother Aaron has collected the gold rings from the Israelites and forged from them a golden calf as an idol of worship. The account relates that Moses took the golden calf, burned it with fire, transposed it into a powder and fed it to the Israelites.

This story has long baffled theologians because heating or burning gold with fire does not, of course, produce powder; it produces molten gold. Later in the story, however, it is explained that the fine powder could be wiped with frankincense and made into white bread cakes, which the old Septuagint Bible calls "bread of the presence".

All of this is mixed and mingled with accounts of fire on the mountain, and the express importance of the Ark of the Covenant—the golden coffer which sent out deadly spears of lightning from between the wings of the cherubim which surmounted its lid. In keeping with the bread of the presence, these bolts of Ark-light were

similarly referred to as "the presence" (seemingly, the presence of God), and the Greeks called it the *electricus*.

Back in old Babylonia, the enigmatic white powder was called *an-na*, meaning "fire-stone", and when made into conical cakes it was *shem-an-na*—denoting cone-shaped or highward fire-stone. According to the Bible, the Israelites referred to the bread-powder as *manna*, which sounds somewhat similar. It is explained by Flavius Josephus in his 1st-century *Antiquities of the Jews* that the word *manna* was actually a question, meaning "What is it?"—and the book of Exodus confirms this, stating "They called it *manna* because they knew not what it was".

This is totally in line with *mfkzt* revelations from the Egyptian *Book of the Dead* (alternatively called the *Papyrus of Ani*). This 18th-dynasty scroll from Thebes, acquired by the British Museum in 1888, is extensively illustrated and is around 76 feet (over 23 metres) in length. In this ancient ritualistic work, the bread of the presence is associated with a pharaoh who seeks the "terminal enlightenment" and, at the completion of each stage of his journey, asks the repetitive question, "What is it?"

Other similar texts date back to the 3rd millennium BC, and it is clear from the Mount Serâbît reliefs in Sinai that the Egyptian kings were ingesting the white *manna* of gold from around 2180 BC. However, only the metallurgical adepts of the mystery schools (the Master Craftsmen) knew the secret of its manufacture, and the ultimate High Priest of Memphis held the title of Great Artificer.

The account relates that Moses took the golden calf, burned it with fire, transposed it into a powder and fed it to the Israelites.

The "terminal enlightenment" (or, as the Greeks called it, the *gnosis*) was an ideal of perpetual quest. As against the physical body, one was also reckoned to have a "light body", which similarly had to be fed so as to be nurtured and to grow. The "light body" was called the *ka* and, although essentially an intangible feature of life, it was said to remain active in the Afterlife. The food of the *ka* was light, which generated enlightenment, and the generative substance of light was the *mfkzt* white powder of gold.

Holding this information in mind, while remembering that all aspects of such discoveries have been a constant source of bewilderment for historians, theologians and even scientists, we can now move forwards in time to our present era.

White Powder Gold Rediscovered

Taking our leave of the Middle East, our story will continue for a while in America where, quite by chance, the mysteries of this long-forgotten science were rediscovered quite recently. Not only did *mfkzt* re-emerge to find its place at the forefront of quantum physics research, but the stories of the Ark of the Covenant, the accounts of lightning, levitation and other godly attributes of the ancient texts, quite suddenly became modern scientific reality.

In 1996, the story of this initial discovery was reported in *NEXUS* articles by the Phoenix, Arizona, crop farmer David Hudson [see 3/05–6]. He explained that his soil suffered from a high sodium content, which caused the surface to be hard and impenetrable by water. To combat this (back in 1976), he was injecting sulphuric acid into the ground so as to break down the crust to a manageable consistency, but, on testing soil constituents that were not dissolved by the acid, he found that one particular material had a most unusual quality. When heat-dried in the Arizona sun, it would flare into a great blaze of white light and totally disappear. Under spectroscopic analysis, however, the substance registered as "pure nothing"!

Following unsuccessful tests at Cornell University, a sample was sent to Harwell Laboratories in Oxfordshire, England, for neutron activation analysis, but even they could not obtain a suitable reading. Eventually, with assistance from the Soviet Academy of Sciences, it was determined that the mysterious, glowing white substance was composed entirely of platinum group metals in a form hitherto unknown to science.

In the course of continued research, the material was regularly heated and cooled, with a resultant fluctuation in its gravitational weight. It was also discovered that, at a certain temperature, the white bead would fall apart to become a monatomic (single atom) powder—at which point its weight fell dramatically to 56% of its starting weight. Further heating at 1160° centigrade then transformed the precious substance into a wonderfully clear glass, at which point the material weight returned to its original 100%. It was seemingly impossible, but it happened time and time again!

Totally bewildered, the scientists continued their investigations. When they repeatedly heated and cooled the sample under inert gases, they found that the cooling processes took the sample to an amazing 400% of its starting weight; but when they heated it again, they found it weighed less than nothing—way below

zero. When they removed the sample from the pan, they discovered that the pan actually weighed more than it did with the material in it, and they perceived that the sample had the ability to transfer its weightlessness to its supporting host. In other words, even the pan was levitating! This was precisely in accordance with the old Alexandrian alchemical text which had discussed the golden Paradise Stone over 2,000 years before: that the material could outweigh its original quantity of gold, but, when transposed to powder, even a feather would tip the scales against it.

The substance was also determined to be a natural superconductor with a null magnetic field, repelling both north and south magnetic poles, while having the ability to levitate and store any amount of light and energy within itself.

At that stage of development, David Hudson met with Dr Hal Puthoff, Director of the Institute for Advanced Studies in Austin,

Texas. In his research into zero-point energy and gravity as a zero-point fluctuation force, Puthoff had determined that when matter begins to react in two dimensions (as Hudson's samples were doing), it should theoretically lose around four-ninths of its gravitational weight. That is about 44%, precisely as discovered in the white powder experiments.

Hudson was therefore able to confirm Puthoff's theory in practice, explaining that when entering a superconductive state the monatomic powder registers only 56% of its starting weight; also, that when heated it can achieve a gravitational attraction of less than zero—at which point, the weighing-pan also weighs less than it did when empty.

Since gravity determines space-time, Puthoff concluded that the powder was "exotic matter" and was capable of bending space-time.

However, the *mfkzt* powder would then be resonating in a different dimension, under which circumstance it should become totally invisible. Again, Hudson confirmed that this was precisely the case: the sample certainly did vanish from sight when its

weight disappeared.

What was being said here was not simply that the substance could be moved out of perceptual vision, but that it was literally transported into an alternative parallel plane—a fifth dimension of space-time. The proof of this was ascertained by attempting to disturb and scoop the substance with spatulas while it was invisible, so that it would be positioned differently when it returned to a visible state. But this did not happen, and the substance returned to precisely the same position and shape as last seen. Nothing was moved or disturbed in the invisible interim, because it had not been there. In short, it was not invisible: it had actually altered its physical state and had transposed into another dimension.

Dr Puthoff explained that this was like the difference between a conventional stealth aircraft, which cannot be detected by radar, and one that can literally disappear into another dimension.

This, then, is the superconductive dimension of the Orbit of Light or, as the Egyptian tomb records called it, the Field of *Mfkzt*.

In the early 1990s, articles concerning stealth atoms and superconductivity began to appear with great regularity in the science

Since gravity determines space-time, Puthoff concluded that the powder was "exotic matter" and was capable of bending space-time.

press. The Niels Bohr Institute at the University of Copenhagen as well as the US Department of Energy's Argonne National Laboratories in Chicago and its Oak Ridge National Laboratory in Tennessee all confirmed that the elements discovered by Hudson certainly existed in the monatomic state. These included gold and the platinum group metals: iridium, rhodium, palladium, platinum, osmium and ruthenium.

When filing his patents, Hudson had the substances classified as Orbitally Rearranged Monatomic Elements (ORMEs), and the scientific terminology to describe the monatomic phenomenon is "asymmetrical deformed high-spin". The substances are superconductors because high-spin atoms can pass energy from one to the next with no net loss of energy.

Warping Space-Time with Exotic Matter

Manipulation of space-time also became a subject of special interest, leading to an astonishing May 1994 announcement in the journal *Classical and Quantum Gravity*. Written by the Mexican mathematical scientist Miguel Alcubierre, it stated:

It is now known that it is possible to modify space-time in a way that allows a spaceship to travel at an arbitrarily large speed by a purely local expansion of the space-time behind the spaceship and an opposite contraction in front of it—a motion faster than the speed of light, reminiscent of the warp drive of science fiction.

This was followed a few months later by a related article in the *American Scientist* ("Space-time Hypersurfing", vol. 82, pp. 422–3, October 1994). In this study, Michael Szpir showed how Alcubierre's concept did not violate Einstein's theory that no object can travel faster than light. He explained that, when in warp mode, the craft would not actually be travelling at all. The theoretical acceleration would be enormous, but the true rate of acceleration would be zero.

Here, then, was a form of speed-of-light travel that required minimum time and minimum fuel...only that the necessary chunk of space-time would ostensibly have moved from in front of the craft, to be relocated behind it, by means of contraction and expansion respectively.

But what was the necessary device to make this possible? The Alcubierre article explained that "exotic matter will be needed to generate a distortion of space-time".

Britain's BBC News science editor Dr David Whitehouse subsequently reported:

The idea relies on the concept that, to physicists, space is not empty... Space has a shape that can be distorted by matter... The starship would simply rest in a warp bubble between the two space-time distortions.

So, what is the "exotic matter" to which Alcubierre referred? It is matter which has a gravitational attraction of less than zero. Szpir described it as "matter with the curious property of having a negative energy density, unlike normal matter (the stuff that makes up people, the planets and the stars), which has a positive energy".

The necessary exotic device is an operative superconductor—and Hal Puthoff had already explained that, in this regard, the Phoenix *mfkzt* was exotic matter with the ability to bend space-time.

Modern Science Meets Ancient Alchemy

Reverting to where we began, we can now take another look at ORMES in relation to their regular ingestion by the Egyptian pharaohs and Babylonian kings, to see precisely how these monatomic elements were used to feed their light bodies, with some astonishing results.

In the May 1995 issue of *Scientific American*, the effect of the platinum group metal ruthenium was discussed in relation to human DNA. It was pointed out that when single ruthenium atoms are placed at each end of a short strand of DNA, the strand becomes 10,000 times more conductive. It becomes, in effect, a superconductor. For some time, chemists had suspected that the double helix might create a highly conductive path along the axis of the molecule, and here was confirmation of the fact.

Similarly, the *Platinum Metals Review* has featured regular articles concerning the use of platinum, iridium and ruthenium in the treatment of cancers (which are caused through the abnormal and uncontrolled division of body cells). When a DNA state is altered (as in the case of a cancer), the application of a platinum compound will resonate with the deformed cell, causing the DNA to relax and become corrected. Such treatment involves no surgery; it does not destroy surrounding tissue with radiation nor kill the immune system, as does radiotherapy or chemotherapy.

The medical profession entered the high-spin arena when the biomedical research division of the pharmaceutical company Bristol-Myers Squibb announced that ruthenium atoms interact with DNA, correcting the malformation in cancer cells. (Monatomic gold and platinum metals are in effect "stealth atoms", and it has now been ascertained that body cells communicate with each other by way of stealth atoms through a system of light waves.) What the new science determines is that monatomic ruthenium resonates with the DNA, dismantles the short-length helix and rebuilds it

correctly—just as one might dismantle and resurrect a dilapidated building.

It is known that both iridium and rhodium have anti-ageing properties, while ruthenium and platinum compounds interact with the DNA and the cellular body. It is also known that gold and the platinum metals, in their monatomic high-spin state, can activate the endocrinal glandular system in a way that heightens awareness, perception and aptitude to extraordinary levels. In this regard, it is considered that the high-spin powder of gold has a distinct effect upon the pineal gland, increasing melatonin production. Likewise, the monatomic powder of iridium has a similar effect on the serotonin production of the pituitary gland, and would appear to reactivate the body's "junk DNA" along with the under-used and unused parts of the brain.

It is of particular significance that, irrespective of all today's costly and extensive research in these areas, the secrets of the highward fire-stones were known to our ancestors many thousands of years ago. They knew that there were superconductors inherent in the human body: they were the elements of individual consciousness which they called the "light body" (the *ka*). They knew that both the physical body and the light body had to be fed to increase hormonal production, and the ultimate food for the latter was called *shem-an-na* by the Babylonians, *mfkzt* by the Egyptians and *manna* by the Israelites.

When filing his patents, Hudson had the substances classified as Orbitally Rearranged Monatomic Elements (ORMEs)

Continued on page 77



STEEP UPHILL CLIMB TO 2012 Messages from the Mayan Milieu

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In early Autumn 2002, Carlos Barrios journeyed north from his home in Guatemala to the eastern edge of the Four Corners. In Santa Fe, New Mexico, at the tail of the Rocky Mountain spine, Mr Barrios spoke in a knowledgeable manner about the Mayan tradition and the fabled Mayan calendars.

The Mayan calendars are an object of intense interest for many thousands of people right now, because they focus upon the watershed date of December 21, 2012. Everything changes by then, it is said.

With a cultural heritage including thousands of pyramids and temples, and a calendar that has proven itself to be astronomically accurate over millions of years, the Maya tradition is widely considered to be a mystic key to the soul of Turtle Island (North America).

In public talks and in a private interview, Mr Barrios laid out his account of the history and future of the Americas and the larger world, based on his understanding of the Mayan tradition as both an anthropologist and an initiate. He spoke also about the path he sees ahead from now until the Winter Solstice of 2012.

The range of teachings and insights

offered by Mr Barrios must be considered in the context of the *realpolitik* of his American homeland. The Maya of Guatemala, their pyramids and their calendar have endured not in a new-age Shambhala of love and light, but in a milieu of treachery, beatings, torture, rape and mass murder.

Decades of Darkness

For 30 long years, right-wing Guatemalan governments—supported both overtly and covertly by the US government—waged a terrorist war against the people of the land, murdering over 200,000 citizens, many of them indigenous Mayan people.

When the war finally wound down in the 1990s, the United Nations Truth Commission conducted an 18-month investigation. The UN found massive violations of human rights by the government of Guatemala with the complicity of the US government. The UN report stated that acts of "aggressive, racist and extremely cruel" violence descended to the level of genocide directed against the country's indigenous Mayan population.

When Amnesty International studied the Guatemalan situation in recent years, they came to an arresting conclusion. They wrote that real peace could come only through confronting Guatemala's "Corporate Mafia State". They described this corporate Mafia state as an "unholy

alliance" of certain national and international economic actors, who work alongside sectors of the police and military and common criminals to control "black" industries such as drugs, arms trafficking, money laundering, car theft rings, illegal adoptions and kidnapping for ransom".

About the great dark shadow that has hung over the south-most part of Turtle Island, Mr Barrios observed: "These injustices began five hundred years ago and continue to this very day in all the Americas. The Indian Wars have never ended. I think the power-holders in the developed world see it as necessary to destroy the indigenous peoples, or at least to destroy their culture, because they are not 'consumers'. The American Dream is built on the back of the Third World. But that is a false distinction, for there is no Third World. There is only One World. We are all part of that one world, and we are all due respect."

While Guatemala has ostensibly been at peace for the last eight years, it is a disturbed peace. The war continues to have a residual impact on the people. Human rights violations still occur regularly, and even international human-rights monitors have been under threat.

Still, in the view of Mr Barrios, who came of age during the war, there have been improvements. "There are no armed guerrillas, and the police and army

are more decent, more respectful," he observed. "Because there is more human respect now, we can try to find a new life."

One eventual consequence of Guatemala's long-enduring climate of terrorism has been mistrust and criticism. From this, few are immune. Accusations are often aimed at people who purport to speak of the Mayan traditions. Mr Barrios is enmeshed in this matrix of uncertainty. He criticises others, and he is criticised himself.

The World Will Not End

Carlos Barrios was born into a Spanish family on El Altiplano, the highlands of Guatemala. His home was in Huehuetenango, also the dwelling place of the Maya Mam tribe.

With other Maya and other indigenous tradition keepers, the Mam carry part of the old ways on Turtle Island. They are keepers of time, authorities on remarkable calendars that are ancient, elegant and relevant.

Mr Barrios is an historian, an anthropologist and an investigator. After studying with traditional elders for 25 years since the age of 19, he also became a Mayan Ajq'ij, a ceremonial priest and spiritual guide, Eagle clan.

Years ago, along with his brother, Gerardo, Carlos initiated an investigation into the different Mayan calendars. He studied with many teachers. He says his Gerardo interviewed nearly 600 traditional Mayan elders to widen their scope of knowledge.

"Anthropologists visit the temple sites," Mr Barrios said, "and read the steles and inscriptions and make up stories about the Maya, but they do not read the signs correctly. It's just their imagination... Other people write about prophecy in the name of the Maya. They say that the world will end in December 2012. The Mayan elders are angry with this. The world will not end. It will be transformed. The indigenous have the calendars, and know how to accurately interpret it—not others."

The Calendars

Mayan comprehension of time, seasons and cycles has proven itself to be vast and sophisticated. The Maya understand 17 different calendars, some of them charting time accurately over a

span of more than 10 million years.

The calendar that has steadily drawn global attention since 1987 is called the Tzolk'in or Cholq'ij. Devised ages ago and based on the cycle of the Pleiades, it is still held sacred.

With the indigenous calendars, native people have kept track of important turning points in history. For example, the Daykeepers who study the calendars identified an important day in the year One Reed, Ce Acatl, as it was called by the Mexica. That was the day when an important ancestor was prophesied to return, "coming like a butterfly".

In the Western calendar, the One Reed date correlates to Easter Sunday, April 21, 1519—the day that Hernando Cortez and his fleet of 11 Spanish galleons

Mayan Daykeepers view the December 21, 2012, date as a rebirth, the start of the World of the Fifth Sun.

arrived from the East at what is today called Vera Cruz, Mexico. When the Spanish ships came toward shore, native people were waiting and watching to see how it would go. The billowing sails of the ships did indeed remind the scouts of butterflies skimming the ocean surface.

In this manner was a new era initiated—an era they had anticipated through their calendars. The Maya termed the new era the Nine Bolomtikus, or nine Hells of 52 years each. As the nine cycles unfolded, land and freedom were taken from the native people. Disease and disrespect dominated.

What began with the arrival of Cortez, lasted until August 16, 1987—a date many people recall as the Harmonic Convergence. Millions of people took advantage of that date to make ceremony in sacred sites, praying for a smooth transition to a new era, the World of the Fifth Sun.

From that 1987 date until now, Mr Barrios says, we have been in a time when the right arm of the materialistic world is disappearing, slowly but inex-

orably. We are at the cusp of the era when peace begins, and people live in harmony with Mother Earth. We are no longer in the World of the Fourth Sun, but we are not yet in the World of the Fifth Sun. This is the time in between, the time of transition.

As we pass through transition there is a colossal, global convergence of environmental destruction, social chaos, war and ongoing Earth changes. All this, Mr Barrios says, was foreseen via the simple, spiral mathematics of the Mayan calendars.

"It will change," Mr Barrios observed. "Everything will change."

He said Mayan Daykeepers view the December 21, 2012, date as a rebirth, the start of the World of the Fifth Sun. It will be the start of a new era, resulting from—and signified by—the solar meridian crossing the galactic equator, and the Earth aligning itself with the centre of the galaxy.

At sunrise on December 21, 2012—for the first time in 26,000 years—the Sun rises to conjunct the intersection of the Milky Way and the plane of the ecliptic. This cosmic cross is considered to be an embodiment of the Sacred Tree, the Tree of Life—a tree remembered in all the world's spiritual traditions.

Some observers say this alignment with the heart of the galaxy in 2012 will open a channel for cosmic energy to flow through the Earth, cleansing it and all that dwells upon it, raising all to a higher level of vibration.

This process has already begun, Mr Barrios suggested. "Change is accelerating now, and it will continue to accelerate."

If the people of the Earth can get to this 2012 date in good shape, without having destroyed too much of the Earth, Mr Barrios said, we will rise to a new, higher level. But to get there, we must transform enormously powerful forces that seek to block the way.

A Picture of the Road Ahead

From his understanding of the Mayan tradition and the calendars, Mr Barrios offered a picture of where we are at and what may lie on the road ahead:

- The date specified in the calendar—Winter Solstice in the year 2012—does not mark the end of the world. Many

outside people writing about the Mayan calendar sensationalise this date, but they do not know. The ones who know are the indigenous elders who are entrusted with keeping the tradition.

"Humanity will continue," he contends, "but in a different way. Material structures will change. From this we will have the opportunity to be more human."

- We are living in the most important era of the Mayan calendars and prophecies. All the prophecies of the world, all the traditions, are converging now. There is no time for games. The spiritual ideal of this era is action.

- Many powerful souls have reincarnated in this era, with a lot of power. This is true on both sides, the light and the dark. High magic is at work on both sides.

- Things will change, but it is up to the people as to how difficult or easy it is for the changes to come about.

- The economy now is a fiction. The first five-year stretch of transition—from August 1987 to August 1992—was the beginning of the destruction of the material world. We have progressed 10 years deeper into the transition phase by now, and many of the so-called sources of financial stability are in fact hollow.

- The banks are weak. This is a delicate moment for them. They could crash globally if we don't pay attention. One critical period is October and November 2002. If the banks crash in these months, then we will be forced to rely on the land and our skills. The monetary systems will be in chaos, and we must then rely on our direct relationship with the Earth for our food and shelter. [The banks haven't crashed as of mid-January 2003, but this doesn't mean they won't in the future... Ed.]

- The North and South Poles are both breaking up. The level of the water in the oceans is going to rise. But at the same time land in the ocean, especially near Cuba, is also going to rise."

A Call for a Fusion

As he met with audiences in Santa Fe, Mr Barrios told a story about the most recent Mayan New Year ceremonies in Guatemala. He said that one respected Mam elder, who lives all year in a solitary mountain cave, journeyed to Chichicastenango to speak with the people at the ceremony.

The elder delivered a simple, direct message. He called for human beings to

come together in support of life and light. Right now, each person and group is going his or her own way. The elder of the mountains said there is hope if the people of the light can come together and unite in some way.

Reflecting on this, Mr Barrios explained: "We live in a world of polarity: day and night, man and woman, positive and negative. Light and darkness need each other. They are a balance. Just now, the dark side is very strong and very clear about what they want. They have their vision and their priorities clearly held, and also their hierarchy. They are working in many ways so that we will be unable to connect with the spiral Fifth World in 2012. On the light side, everyone thinks they are the most important, that their own understandings, or their group's understandings, are the key. There's a diversity of cultures and opinions, so there is competition, diffusion and no single focus."

As Mr Barrios sees it, the dark side works to block fusion through denial and materialism. It also works to destroy those who are working with the light to get the Earth to a higher level. They like the energy of the old declining Fourth World, the materialism. They do not want it to change. They do not want fusion. They want to stay at this level, and they are afraid of the next level.

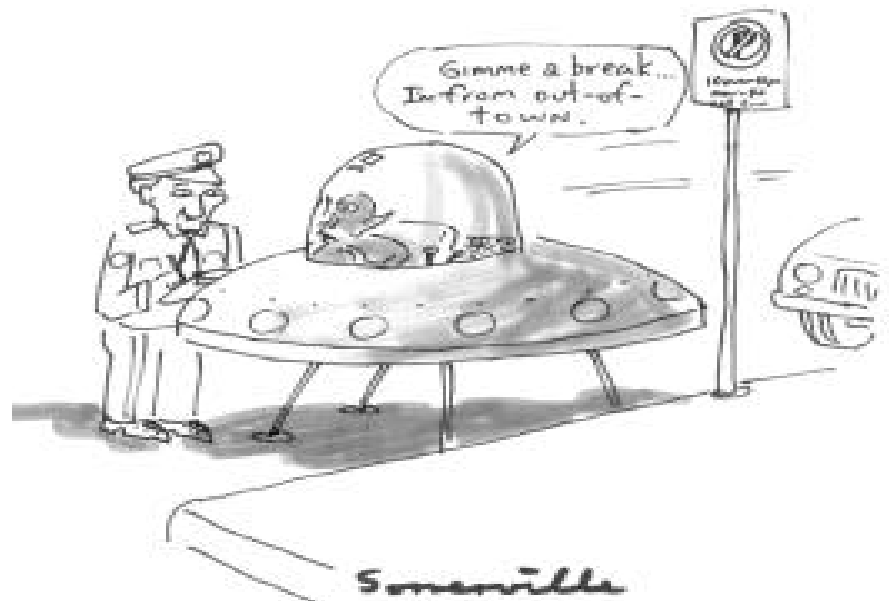
The dark power of the declining Fourth World cannot be destroyed or overpowered. It's too strong and clear for that, and that is the wrong strategy. The dark can only be transformed when confront-

ed with simplicity and open-heartedness. This is what leads to fusion—a key concept for the World of the Fifth Sun.

Mr Barrios said the emerging era of the Fifth Sun will call attention to a much overlooked element. Whereas the four traditional elements of earth, air, fire and water have dominated various epochs in the past, there will be a fifth element to reckon with in the time of the Fifth Sun: ether.

The dictionary defines *ether* [or *aether*] as the rarefied element of the Heavens. Ether is a medium. It permeates all space and transmits waves of energy in a wide range of frequencies, from those of cellphones to human auras. What is "ethereal" is related to the regions beyond Earth: the Heavens. Ether—the element of the Fifth Sun—is celestial and lacking in material substance, but is no less real than wood, stone or flesh.

"Within the context of ether, there can be a fusion of the polarities," Mr Barrios said. "No more darkness or light in the people, but an uplifted fusion. But right now, the realm of darkness is not interested in this. They are organised to block it. They seek to unbalance the Earth and its environment so we will be unready for the alignment in 2012. We need to work together for peace and balance with the other side. We need to take care of the Earth that feeds and shelters us. We need to put our entire mind and heart into pursuing unity and fusion now, to confront the other side and preserve life."



Be Ready for this Moment in History

Mr Barrios told his audiences in Santa Fe that we are at a critical moment of world history. "We are disturbed," he said. "We can't play anymore. Our planet can be renewed or ravaged. Now is the time to awaken and take action. Everyone is needed. You are not here for no reason. Everyone who is here now has an important purpose. This is a hard but a special time. We have the opportunity for growth, but we must be ready for this moment in history."

Mr Barrios offered a number of suggestions to help people walk in balance through the years ahead. "The prophesied changes are going to happen," he said, "but our attitude and actions determine how harsh or mild they are."

- We need to act, to make changes and to elect people to represent us who understand and who will take political action to respect the Earth. Meditation and spiritual practice are good, but also action.

- It's very important to be clear about who you are, and also about your relation to the Earth.

- Develop yourself according to your own tradition and the call of your heart. But remember to respect differences, and strive for unity.

- Eat wisely. A lot of food is corrupt in either subtle or gross ways. Pay attention to what you take into your body.

- Learn to preserve food, and to conserve energy.

- Learn some good breathing techniques, so you have mastery of your breath.

- Be clear. Follow a tradition with great roots. It is not important what tradition; your heart will tell you, but it must have great roots.

- We live in a world of energy. An important task at this time is to learn to sense or see the energy of everyone and everything: people, plants, animals. This becomes increasingly important as we draw close to the World of the Fifth Sun, for it is associated with the element ether—the realm where energy lives and weaves.

- Go to the sacred places of the Earth to pray for peace, and have respect for the Earth which gives us our food, clothing and shelter. We need to reactivate the energy of these sacred places. That is our work."

- According to Mr Barrios's reading of the Mayan calendar, if war happens in November 2002 or after, then it's bad, but not catastrophic. But if it happens between April and November 2003, it will be catastrophic. Really bad. It could eventually result in the death of two-thirds of humanity. "So stay active," he said. "If we are active, we can transform the planet. The elders watch to see what happens."

- Many Mayan elders and knowledge-keepers may be eliminated in the next few years. For the first half of the current Katun (20-year period), the dark side has a lot of power. But that will pass in three to four years from now. The tide can turn. Amazing things are going to happen.

- One simple but effective prayer technique is to light a white or baby-blue-coloured candle. Think a moment in peace. Speak your intention to the flame and send the light of it on to the leaders who have the power to make war or peace.

We Have Spiritual Work to Do

According to Mr Barrios, this is a crucially important moment for humanity and for Earth. Each person is important. If you have incarnated into this era, you have spiritual work to do balancing the planet.

He said the elders have opened the doors so that other races can come to the Mayan world to receive the tradition. The Maya have long appreciated and respected that there are other colours, other races and other spiritual systems. "They know," he said, "that the destiny of the Mayan world is related to the destiny of the whole world."

"The greatest wisdom is in simplicity," Mr Barrios advised before leaving Santa Fe. "Love, respect, tolerance, sharing, gratitude, forgiveness. It's not complex or elaborate. The real knowledge is free. It's encoded in your DNA. All you need is within you. Great teachers have said that from the beginning. Find your heart, and you will find your way."

Editor's Notes:

- **Carlos Barrios** is the author of the Spanish book, *Kam Wuj: El Libro Del Destino*. Carlos is in the process of having the book translated and published in English. Carlos can be contacted via Saq' Be', Organization for Mayan and Indigenous Spiritual Studies at: PO Box 31111, Santa Fe, NM 87594, USA, tel (505) 466 4044, email SaqBe@SacredRoad.org, website <http://www.sacredroad.org>.

Saq' Be' is a US-based non-profit organization operated by young adults to bring young adults and others together with ancient traditions for cultural preservation and to foster a deeper spiritual, ecological and communal awareness so as to plant the seeds for a more harmonious future.

- **Steven McFadden** is a writer, teacher, healer and astrologer based in Santa Fe, New Mexico. He is the author of several non-fiction books, including *Profiles in Wisdom: Native Elders Speak about the Earth*. This article was first published in the October 2002 issue of his newsletter, *Chiron Communiqué* (vol. 7, no. 10). The text plus references can be seen at <http://www.chiron-communications.com/communique%207-10.html>. Steven McFadden can be contacted at Chiron Communications, 7 Avenida Vista Grande #195, Santa Fe, NM 87508-9199, USA, by email at Chiron@chiron-communications.com, or via his website, <http://www.chiron-communications.com>.





REVIEWS

BOOKS

Reviewed by Ruth Parnell

ROYAL R. RIFE: Humanitarian – Betrayed and Persecuted by Gerald F. Foye

Rife Technology Plasma Publishing, USA, 2002 (revised 2nd printing)
ISBN 0-9659613-3-8 (157pp tpb)
Price: US\$16.50 inc. s&h in USA; outside USA, add US\$3.00 s&h; euro21,90
Availability: **USA**—Rife Technology Plasma Publishing, 9856 Old Ridge Road, Spring Valley, CA 91977-3462, email GFoye@aol.com, website <http://www.rtplasmapub.com>;
Europe—NEXUS Office

History will eventually judge Dr Royal Raymond Rife as one of the 20th century's great scientists, doctors, inventors, researchers and humanitarians—but not until orthodox science and medicine accepts his groundbreaking discoveries. In the late 1920s, Dr Rife developed the Universal Prismatic Microscope, which enabled him to study *live* micro-organisms, and a "radiant plasma resonant frequency emission device", which, using specific frequencies, could "devitalise" all sorts of disease agents, including the "cancer-causing organism".

Researcher Gerald Foye is one of many involved in rediscovering and preserving Rife's legacy (we've reviewed a few such books recently), and here he touches on not just Rife's life and work but the people he worked with, for good and ill, up until his death in 1971. Despite devoting his life to the service of humanity, Rife suffered persecution and vilification particularly at the hands of the AMA and its long-time journal editor, the notorious Morris Fishbein,

because his technology was just too successful. Many doctors who had used his "beam ray" device vouched for him, as did many of the patients he cured, but the cards were stacked against him even in the courts. John Crane, a later associate of Rife, also fell foul of the law, and there's speculation as to how true to Rife's original designs and frequencies Crane's devices were.

Foye's treatment is somewhat disjointed and by no means chronological, and in many instances the events being discussed are not date-specific, which is a little confusing; also, the overuse of the exclamation mark is quite irritating. But these points aside, this is a good introduction to the field.

THE GOLDEN RATIO: The Story of Phi, the Extraordinary Number of Nature, Art and Beauty by Mario Livio

Review/Headline, UK, 2002
ISBN 0-7472-4987-3 (294pp hc)
Price: A\$39.95; NZ\$54.99; £15.00; euro26,90; US\$24.95
Availability: **Australia**—Hodder Headline, tel (02) 8248 0800; **NZ**—Hodder Moa Beckett, tel (09) 478 1000; **UK**—Hodder Headline, www.hodderheadline.co.uk;
Europe—NEXUS, tel +31 (0)228 324076;
USA—Transworld Random House, tel (212) 572 2571

Call it the Golden Ratio, the Golden Mean, the Golden Section or *phi* (ϕ), the never-ending number 1.6180339887... has intrigued humanity since antiquity. This irrational number holds answers to the secrets of divine proportion, and thus is a key to the essence of creativity and understanding in art, architecture, design, biology, botany and other disciplines.

Professor Mario Livio (who is head of the

science division at the Hubble Space Telescope Science Institute and author of *The Accelerating Universe*) takes the reader to the heart of this number, tempting us to touch on the essence of beauty itself. But rather than giving us just a picture book of *phi*'s breathtaking expressions in nature (he does have some great graphics, it should be said), Livio takes us on an enticing journey into the history of numbers, mathematics and geometry and the people who were part of it. His perspectives on ancient Indian, Babylonian, Egyptian and Greek understanding of divine number are intriguing, as are his revelations about Kepler's synthesis of the Golden Ratio in a new cosmology.

Anyone who has ever marvelled at a logarithmic spiral will be enthralled by this considered examination that takes in the wonders of human consciousness and the possibility that God is indeed a mathematician. Whether you're into Plato, pyramids, platonic solids, Pythagoras, Ptolemy or prime numbers, there's plenty in Professor Livio's book to excite the brain and imagination.



REVIEWS



THE DEFINITIVE WEE BOOK ON DOWSING:

A Journey Beyond Our Five Senses by Hamish Miller

Penwith Press, UK, 2002
ISBN 0-9533316-1-X (58pp hc)
Price: A\$23.00 inc. p&h; NZ\$19.00;
£6.40; euro11.90

Availability: **Aust**—Pauline Roberts, tel 0407 011 733, email dowsing@divstrat.com.au; **NZ**—Stoneprint Press, tel (03) 318 7377; **UK**—Penwith Press, PO Box 11, Hayle, Cornwall TR27 6YF, email penwithpress@talk21.com; **Europe**—NEXUS Office, tel +31 (0)228 324076

Anyone who's ever had anything to do with dowsing would be inspired by its practicality and magic. It's not just about finding underground water and minerals: it can be as useful for confirming whether food in the fridge has gone off, as it is for exploring metaphysical dimensions.

Long-time dowser Hamish Miller (author of *The Sun and the Serpent, It's Not Too Late* and *The Dance of the Dragon*; see 2/17, 6/01, 8/03) has put together a gorgeous little book that has appeal for beginners as well as lapsed and experienced dowsers alike. Each chapter takes up just two pages: on the left is the text, containing choice facts and insights; on the right is a beautifully drawn diagram or illustration by Jean Hands or one borrowed from historical sources.

Starting off with history, development and pioneers, Miller moves on to the various dowsing tools and how to make and use them. He provides simple exercises that help you tune your mind, concentrate on the target, and word your questions the right way. "The dowsing tool," he explains, "provides a physical response to receptors in your consciousness which are capable of

probing beyond normal sense horizons."

Dowsing has an astounding array of applications. Miller touches on locating underground streams, finding and dating buried pipes and ruins with directional dowsing, map dowsing for pinpointing objects and missing persons, diagnosing allergies, and identifying human auric, landscape and planetary energy fields and currents. Above all, he opens the door to a perceptual paradigm that is changing our world.

PERPETUAL WAR FOR PERPETUAL PEACE

by Gore Vidal

Clairview Books, UK, 2002 (first published in USA by Thunder's Mouth Press, 2002)
ISBN 1-902636-38-4 (160pp tpb, UK),
1-5602-5405-X (tpb, USA)

Price: A\$30.00; NZ\$36.95; £8.95 + £2 p&p; euro12.90; US\$10.00

Availability: **Aust**—Rudolf Steiner Book Centre, tel (02) 9264 5169; **NZ**—Ceres Books, tel (09) 574 0373; **UK**—BookSource, tel 0141 5581366; **Europe**—NEXUS Office; **USA**—Thunder's Mouth Press, tel (212) 614 7880

Veteran US best-selling author Gore Vidal, now living in self-imposed exile in Italy, rails against decades of United States government hypocrisy at home and abroad in *Perpetual War for Perpetual Peace*. This is a compilation that starts off with his unpopular overview of the events of September 11, 2001—unpopular because attempting to explain *why* America "got to be so hated" is a guarantee *not* to get published in the US, even by so-called alternative media (as was the case with this particular essay), which is why we're more likely to see his commentary in the non-US media.

Vidal is one of the few "big name" writers

who has seriously questioned why the US military-industrial complex is stirring up a melting pot that is now bubbling over into a likely but unpopular war with Iraq. He's also one of the few to take on the broader ramifications of the 1995 Oklahoma City bombing (McVeigh was not a lone bomber, he says) and the subsequent Clinton-led anti-terrorism legislation that set the stage for the Bush II response to the bin Laden terrorist threat. Vidal reminds us that the public mindset was already brainwashed by decades of "an unrelenting demonization of the Muslim world in the American media".

Included in Vidal's pastiche of "Causes of Conflict in the Last Empire" is a list of 200 US military incursions since 1945 (compiled by the Federation of American Scientists), his takes on McVeigh (published in *Vanity Fair* in 1998 and 2001), his 1997 *Nation* essay on the new theocrats and their true "morality", and his prophetic letter to the US President-Elect in December 2000.

Vidal's writings really make us wonder who the *real* evil-doers are.





REVIEWS

WILD THINGS THEY DON'T TELL US by Reg Presley

Metro Publishing Ltd, UK, 2002
ISBN 1-84358-043-8 (272pp hc)
Price: A\$39.95; NZ\$59.95; £16.99;
Euro30,90; US\$27.00
Availability: **Australia**—Bookwise, tel (08)
8268 8222; **NZ**—Forester Books, tel (09)
415 2080; **UK**—Metro Publishing, tel 020
7381 0666; **Europe**—NEXUS Office;
USA—Trafalgar Square, tel (802) 457 1911

Life would never be the same again for Reg Presley after he entered his first crop circle formation at Alton Barnes, Wiltshire, in 1990. Not that it hadn't been strange days before then, if his history as founder of the world-famous band The Troggs in 1964 is anything to go by.

"Wild things" aplenty have caught Reg Presley's attention in the meantime. Some readers may recall his name in connection with UK UFO researcher Ray Santilli's release of the infamous "alien autopsy" film footage in 1995 (Reg has his own TV production company, and Ray was once involved in producing The Troggs).

In his aptly titled book, *Wild Things They Don't Tell Us*, Reg Presley covers some of the territory of latter-day alternative thinking and speculation. Crop circles, UFOs (including his own sightings and those of friends and fellow musicians), the Face on Mars, Dave Hudson's white powder gold and the sacred Ark of the Covenant, Royal Rife's cancer cures and a secret US/UK intelligence cabal are all part of Reg's orb in his passionate, absorbing, personal perspective. You'd swear he's been reading *NEXUS* for years; in fact, we're one of the few sources listed—along with the books of Laurence Gardner, whose work on the origin of Christianity has had an enormous impact on Presley. (Oh, but if only more care had

been taken with proper-name spellings!)

There are accounts in *Wild Things...* that are unique to this book, and which will introduce many people to undercurrents and new paradigms that they won't have encountered before. For this, Presley is to be congratulated. His high profile will ensure that a wider audience is exposed to all these "wild things they don't tell us".

THE GODS WERE ASTRONAUTS: Evidence of the True Identities of the Old 'Gods'

by Erich von Däniken

Vega/Chrysalis Books, UK, 2002
ISBN 1-84333-625-1 (208pp tpb)
Price: A\$29.95; £12.99; euro22,90;
US\$14.95; C\$22.95

Availability: **Australia**—New World Music, tel (02) 9565 4522; **UK**—Chrysalis Books, tel 020 7697 3000, website <http://www.chrysalisbooks.co.uk/books/publisher/vega>; **Europe**—NEXUS Office, tel +31 (0)228 324076; **USA/Canada**—Sterling Publishing, tel (212) 532 7160

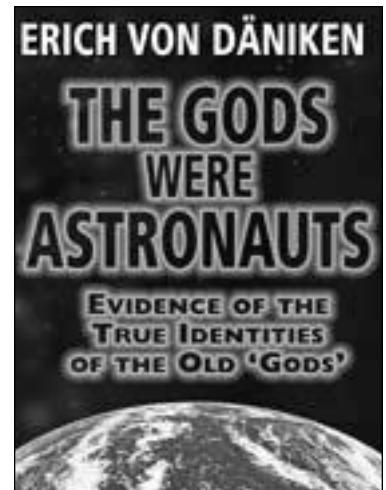
Many researchers owe much credit to Erich von Däniken for his popularisation of the idea that humanity has been visited, let alone seeded, by "the gods" or extraterrestrial beings. And the more we've found out since the 1968 release of his *Chariots of the Gods?*, the more his thesis can be judged as having a ring of truth—of course, to the disdain of his detractors.

Von Däniken's latest book, *The Gods Were Astronauts*, is not a huge advance on his previous works; it restates the same thing he's been saying all along, but with different examples. For instance, the Mary apparitions, most notably the Fátima appearances and the miracle of the "dancing Sun", witnessed by many thousands, von Däniken

attributes to an extraterrestrial source. Who knows, he may have a point here, and the power of that idea is charged by the Vatican's cover-up on arguably the *real* secret of Fátima, considering the reactions of a number of Popes over the decades.

Other evidence that von Däniken quotes refers to anthropology, exemplified in the Colombian Kogi town of Burritaca and the Sulawesi Toraja culture that reflect their tribes' cosmological world in the design, orientation and construction of their houses and stupas (there are some beautiful colour photos to illustrate what he means). And then, of course, there are the records from ancient Indian texts referring to flying machines, aerial battles and something akin to a latter-day nuclear missile defence system.

What von Däniken says is at odds with conventional religious and scientific thought, yet he rallies for the two to coexist respectfully and chase away the shadows of fundamentalism that might hinder the freedom of the human spirit.



REVIEWS



HARNESSING THE WHEELWORK OF NATURE: Tesla's Science of Energy

edited by Thomas Valone, PhD, PE
Adventures Unlimited Press, USA, 2002
ISBN 1-931882-04-5 (274pp tpb)
Price: A\$39.00; NZ\$43.00 + p&p; £15.50
inc. p&p; euro21.90; US\$16.95 + s&h
Availability: **Australia/NZ/UK/Europe**—
NEXUS offices; **USA**—Adventures
Unlimited, tel (815) 253 6390, website
<http://www.adventuresunlimitedpress.com>

Dr Nikola Tesla's dream of the worldwide wireless transmission of power was never realised, but the centenary of the construction of his Wardencliff Tower in New York is an anniversary to be remembered.

This is one motive behind this collection of papers dedicated to Tesla's work and memory, edited Tom Valone, an engineer, physicist, author, long-time Teslaphile and president of Integrity Research Institute. Tesla himself knew he was way ahead of his time, and perhaps his eccentric personality was as much a hindrance as a help, as borne out in his relationships with rich benefactors like Westinghouse and Morgan. But these essays, papers, technical briefings and press clippings remind us that we still have so much to learn from Tesla and his work.

This compilation is divided into three parts. The first section explores the early years of Tesla's genius with electricity, and has contributions from William Terbo (a descendant of Tesla), UK author Keith Tutt, as well as Tom Valone, who looks at the history of the Niagara Falls hydroelectric projects of the 1890s. The second section focuses on the principles of wireless power transmission. It includes Tesla's landmark paper plus specialist commentaries from the early 1980s onwards by physicists and engineers such as Dr Andrija Puharich, Toby Grotz, brothers James and Ken Corum, Dr

Elizabeth Rauscher and more. There's coverage of self-sustained longitudinal waves, Tesla's magnifying transmitter and ELF oscillator, and how to harness the Earth-ionosphere resonant cavity. The third section features miscellaneous articles on the homopolar generator, Tesla's ioniser and ozonator, FBI documents on Tesla, plus a selection of Tesla's patents. A welcome addition to the Tesla bookshelf.

THE LOST TESTAMENT: From Eden to Exile – The Five-Thousand-Year History of the People of the Bible

by David Rohl

Century, UK, 2002
ISBN 0-7126-6993-0 (513pp hc)
Price: A\$54.95; NZ\$65.00; £18.99;
Euro33,90

Availability: **Australia/NZ/UK**— Random House; **Europe**—NEXUS Office

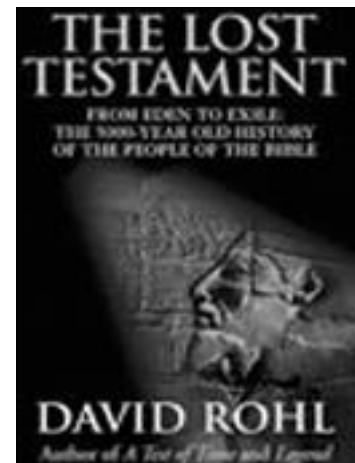
Far from being a work of fiction, the Old Testament is based on actual events and people, says historian and Egyptologist David Rohl (author of *A Test of Time* and *Legend: The Genesis of Civilisations*). This latest book, *The Lost Testament*, is the culmination of Rohl's 25-plus years of cross-disciplinary research into the epic story of the Children of Yahweh, the Israelites.

Rohl includes new findings from archaeology and astronomy as well as geological and climate sciences, and draws on texts from Mesopotamian, Egyptian and other contemporary ancient sources. His hands-on approach has taken him to all the out-of-the-way places he visits in this book. And yet, while he has all the academic credentials, he has maverick status amongst the orthodoxy.

The Genesis story begins far away in the Garden of Eden, at the end of the Neolithic Age (c. 5375 BC), with the "first" man and woman—the chieftain Adam and priestess

Eve—forming a tribal union that began the Adamite line and coincided with the flowering of agriculture and the domestication of animals in the Middle East. The location of Eden, he says, was a lush valley to the east of Lake Urimiya in what is now western Iran/Kurdistan. Rohl escorts us through the waves of patriarch-led tribal migrations south across the Zagros Mountains and into Mesopotamia, the creation of settlements and finally city-states, and the travels to Egypt before the eventual return to "the Promised Land". He catalogues the catastrophes and conflicts that punctuate these several thousand years of history in terms of a New Chronology. He closes with the destruction of Jerusalem and the exile of the Israelites to Babylon in 587 BC.

This is a solid historical perspective that rewrites many of the wrongs of entrenched biblical archaeological misinterpretation. It has no hint of ET intervention—Rohl taking the view that the ancient Mesopotamian gods were based on real men and women who were heroes in their time.





REVIEWS

SECRETS OF THE EXODUS

by Messod and Roger Sabbah

Thorsons, UK, 2002

ISBN 0-00-713315-4 (290pp hc)

Price: A\$55.00; NZ\$69.95; £18.99; euro33,90

Availability: **Australia/NZ/UK—**

HarperCollins, <http://www.thorsons.com>;

Europe—NEXUS Office

Having just reviewed David Rohl's book, *The Lost Testament*, I'm now faced with contradictions in *Secrets of the Exodus* by French researchers Messod Sabbah and Roger Sabbah (a rabbi with a passion for Egyptology), who have both studied the Talmud and Torah extensively. Their book was first published in French in 2000, but I wonder whether today they would reconsider their thesis in light of the so-called New Chronology, which recalibrates the dating system for the Middle Eastern and Egyptian worlds of antiquity.

The authors contend that a Hebrew Exodus from Egypt did not happen according to the Bible story, but coincided with the expulsion of the monotheists who lived in Akhet-Aten, the glorious city established by the Pharaoh Akhenaten. They maintain there is no evidence to support any Hebrew slave community at the time of Akhenaten. But what if the dating system they use is out by several hundred years? What if a different Pharaoh altogether presided over the Exodus? Any evidence uncovered that might support the Hebrew slave thesis could be ignored if it didn't fit the established timeline.

The Sabbahs find close parallels between Abraham and Akhenaten—going so far as to suggest they were the same person (so much for Ur)—as well as between Moses and Ramesses I. They also maintain the Hebrew script is based on Egyptian hieroglyphics.

Apart from suggesting that all the Hebrew

patriarchs were Egyptian, they propose that the early Old Testament books were deliberately written with most Egyptian linkages omitted and with an emphasis on a much earlier Mesopotamian origin for monotheism, so that the Israelites would gain favour with their masters during their Exile in Babylon. The authors' research into Hebrew/Egyptian links is impressive, but I have reservations about their conclusions based on the chronologies they use.

UNIVERSAL WATER:

The Ancient Wisdom and Scientific Theory of Water

by West Marrin, PhD

Inner Ocean Publishing, USA, 2002

ISBN 1-930722-15-X (341pp tpb)

Price: US\$17.95 + s&h; euro22,90

Availability: **USA—**Inner Ocean

Publishing, tel (808) 573 8000, website

<http://www.innerocean.com>; Bookpeople,

tel 1-866 731 2216; **Europe—**Contact

NEXUS Office, tel +31 (0)228 324076

The world is in a crisis situation over supply and quality of fresh water. And with the growing trend towards privatisation of water infrastructure and the supply itself, many poor communities cannot afford to buy water. So how can we turn this around?

West Marrin, who has a PhD in water resources from the University of Arizona and now lives surrounded by the Pacific Ocean on Kaua'i in the Hawaiian Islands, argues in *Universal Water* for a perceptual shift in our attitude to water. He sets our sights on a synthesis between the ancient and modern viewpoints, taking us beyond regarding water as just a commodity or something pleasing to behold.

Ancient peoples revered water as a sacred, conscious, living entity, and today there's a

growing trend towards rediscovering its role in the natural rhythms of life—a type of "modern naturalism", as he describes it. But this trend is now also being informed by a new science which is exploring the molecular and geometric structure as well as energetic frequency signatures of all sorts of water—from the sea, glaciers, rivers, running streams and springs.

The pioneering work of early 20th-century figures like Viktor Schauberger and Albert Szent-Györgyi is being expanded by scientists such as Rupert Sheldrake (morphic resonance), Patrick Flanagan (microclusters) and Masaru Emoto (water crystal photography), who, in effect, are raising science from the mundane to the esoteric level.

By focusing on these and other breakthroughs, Dr Marrin gives a broader context within which to respond to the water crisis. It's imperative for our future that his message gets through to representatives of water and financing authorities, corporations, NGOs and all tiers of government.



REVIEWS



MOSES AND AKHENATEN: The Secret History of Egypt at the Time of the Exodus

by Ahmed Osman

Bear & Co./Inner Traditions, USA, 2002

ISBN 1-59143-004-6 (262pp tpb)

Price: A\$42.00; NZ\$54.95 + p&p;

£15.99; euro22,90; US\$18.00

Availability: **Australia**—Brumby Books, tel

(03) 9761 5535; **NZ**—Southern Publishers

Group, tel (09) 309 6930; **UK**—Deep

Books, tel 020 8693 0234; **Europe**—

NEXUS Office; **USA**—Inner Traditions, tel

(802) 767 3174, website

<http://www.InnerTraditions.com>



This thesis throws one more spanner in the works, as Cairo-born, UK-based author Ahmed Osman puts a different spin on biblical and Egyptian history, arguing that Moses was not only Egyptian but was one and the same person as the "heretic" Pharaoh Akhenaten who introduced a monotheistic Sun god religion into Egypt.

Here we have another reworking of events surrounding the life of Moses, where Moses had Egyptian parents and was brought up by Israelite relatives—as opposed to being of Hebrew birth and adopted by the wife of the Egyptian Pharaoh of the time. The veracity of these claims depends in part on which chronology you use, and Osman's dates are at odds with the so-called New Chronology and new archaeological findings.

Osman is convinced that Akhenaten—Moses—did not die when claimed, but took refuge for 25 years at the Mount Sarabit (Serâbît/Mount Horeb) temple and mining outpost in the Sinai Peninsula—the same temple that explorer Petrie discovered in 1904 and which is linked to ancient white powder gold alchemy. However, Osman doesn't enlarge on this strange substance or the alchemical rites associated with it (see Laurence Gardner's article this issue).

At Sarabit, the Pharaoh-in-exile continued to develop his monotheistic religious ideas, no doubt adopting some of the local Semitic

rituals before returning to Egypt to try to regain his throne, says Osman, but finally dying at the hands of Seti I before he could set foot in the Promised Land. Osman also points out that the Ten Commandments have commonalities with the Egyptian *Book of the Dead*. His study makes for an interesting alternative perspective—but in my mind, the chronology is still open to question.

IN QUEST OF LOST WORLDS: Journey to Algeria, Ethiopia, Yucatan and Beyond

by Count Byron de Prorok

Adventures Unlimited Press, USA, 2002

(first published 1937)

ISBN 1-932813-56-9 (309pp tpb)

Price: A\$39.00; NZ\$43.00 + p&p; £15.50

inc. p&p; euro21,90 ; US\$16.95 + s&h

Availability: **Australia/NZ/UK/Europe**—

NEXUS offices; **USA**—Adventures

Unlimited, tel (815) 253 6390, website

<http://www.adventuresunlimitedpress.com>

Between 1925 and 1934, the Anglo-Hungarian archaeologist/explorer Count Byron Khun de Prorok led a number of off-the-beaten-track expeditions to northern Africa as well as Central America. His account, *The Quest of Lost Worlds*, was published in 1936, and this is a reprint of the original that includes the quaintly hand-drawn maps and photographs.

Apparently the Count was a populariser of archaeology yet had a fascination for occult subjects—a combination that stood him in good stead in his travels. These five expeditions start with Algeria in 1925–26, with the discovery of the tomb of the legendary Queen of the Tuaregs in the A'Hagggar mountain range in the Sahara, and move on to Libya with the excavation of the megalithic Jupiter–Ammon temple in 1926–28. Next, there's a short trip to Tripolitania in 1931 to visit strange dunes and tunnels. The Count's narrative reads like a true explorer's travelogue, full of insights about the people he encounters, their cultural and religious traditions, their architecture and the landscapes in which they live.

In 1932–33, the Count turned his attentions to Mexico, to search for Atlantis at Chichén Itzá in the Yucatán, and to Guatemala, to uncover Mayan pyramids. But he was back in Africa in 1933–34, on the quest for King Solomon's fabled mines. Adventures like these are hard to come by these days!

As a finale to this edition, modern-day explorer/publisher David Childress reprints the compelling A'Hagggar wall paintings from a rare 1959 book, *The Search for the Tassili Frescoes*, by Henri Lhote. These paintings, like many of the Count's travels, hint at a civilisation that once flourished in what is now the Sahara Desert.

An inspiring detour into times past.



REVIEWS

THE BIBLE CODE 2: The Countdown by Michael Drosnin

Weidenfeld & Nicolson, UK, 2002 (by arrangement Viking-Penguin, USA, 2002)
ISBN 0-297-82957-2 (292pp tpb);
0-670-03210-7 (304pp hc in USA)
Price: A\$24.95; NZ\$29.99; £9.99;
euro34,90; US\$26.95
Availability: **Aust**—Allen & Unwin, tel (02) 8248 0800; **NZ**—Archetype, tel (09) 377 3800; **UK**—Orion, tel 01903 721596;
Europe—NEXUS Office; **USA**—Penguin Putnam, <http://www.penguinputnam.com>



We are amidst the End of Days, according to the Bible code—and if peace is not the choice of some key leaders, we face nuclear annihilation by 2006. How it will be played out depends on a solution being found to the Israeli–Palestinian crisis. This is the key message that journalist Michael Drosnin has gleaned in his research since his first *Bible Code* book was published in 1997 (see review, 4/05). He's continued his association with Russian-born Israeli mathematician Eliyahu Rips—and was amazed to find Rips himself immortalised in the code as its discoverer via a computer program.

The impetus for this follow-up book was the attack on the World Trade Center towers on September 11, 2001. Not only did the destruction happen before Drosnin's eyes, a few blocks away from his home, but the whole scenario was already there in the Bible code. Readers of the first book will recall that Drosnin, using Rips's computer program, saw the assassination of Israeli PM Yitzhak Rabin in the code and sent a warning a year before the deed was done.

It helps to know the Hebrew alphabet to appreciate the revelations of the code, otherwise we have to take Drosnin's word for it. Be that as it may, we're in for many surprises, political and even off-world. While on the one hand Drosnin has done his utmost to get the message through to key leaders—Arafat, Sharon, Peres, Barak, Clinton, Bush—to prevent a doomsday scario, he's

also come across intriguing clues about the code itself. For example, it might be revealed in a key artefact—an inscribed obelisk, a metallic ark-like receptacle, or even a UFO relic—to be found in the salt-encrusted Lisan Peninsula in the Dead Sea.

Further, the Bible code and DNA code may be linked—indeed, may have the same off-planet origin. Francis Crick—the co-discoverer of DNA—is even quoted as saying that DNA has an alien source, and that we're the product of Directed Panspermia! This book may make or break us. The next instalment can't come soon enough...

THE SHINING ONES

by Christian and Barbara Joy O'Brien

Dianthus Publishing Ltd, UK, 2002
ISBN 0-946604-20-7 (752pp hc)
Price: £49.50; US\$75.00
Availability: **UK**—The Patrick Foundation/
Golden Age Project, POB 72, Cirencester
GL7 6YG, tel 01285 641924, website
<http://www.goldenageproject.org.uk>

This vast work is the sum of a lifetime's work for authors Christian and Barbara Joy O'Brien (in fact, Christian, a geologist, died in 2001). It enlarges on two earlier books, *The Megalithic Odyssey* (1983) and *The Genius of the Few* (1985).

The story traces the influence of the so-called "Shining Ones", who allegedly oversaw the progress of humanity for several thousand years. They helped establish agriculture in the Near East around 8500 BC, the authors contend, and c.8000 BC founded a settlement—the Garden in Eden—at Kharsag in ancient Lebanon. They had a hand in establishing sophisticated structures and city-states, the arts and sciences, laws and customs, as well as philosophies for creating a better world. Indeed, the authors maintain we can learn much from their legacy at a time when our world is so poised between the forces of light and darkness.

But who were they, and from where did they come? This is where exoteric history, supported by archaeological and textual evidence, meets esoteric realms, for the authors conclude that these Shining Ones, the Anannage (as they call them), were a group of archangels and angels from high astral, even causal, dimensions (though some were Watcher-Angels of the negative path). Yet their patronage was not limited to the Near East and North Africa, for evidence of it can be found in the Tuatha de Danann myths of ancient Ireland, in Cornwall, Brittany, Norway, India, China, Japan, Australasia and Oceania—all around the globe.

The authors have drawn on the Sumerian Kharsag Epics, the Chronicles of Enoch and an alternative translation of the book of Genesis for this far-reaching, esoteric sourcebook that cannot possibly be summed up in as short a review as this.

REVIEWS



VIDEOS

Reviewed by Duncan Roads

OUT OF THE BLUE

Produced by FCZ Media, USA, 2002
(95mins, PAL VHS, NTSC VHS & DVD)
Price: US\$19.95 (DVD US\$24.95)

Availability: Order via the Internet website <http://www.outoftheblue.tv>

This is definitely one of the best UFO documentaries I've ever seen. Five years in the making (a former UFO sceptic being on the team), the result is a well-presented video that has won awards. It includes testimony from astronauts Gordon Cooper and Edgar Mitchell; from Royal Navy Admiral Lord Hill-Norton and MoD staffer Nick Pope; from Russian cosmonaut Pavel Popovich and even former President Jimmy Carter gets a clip. There is also acknowledgement of the French COMETA Report's significance, and good coverage of the famous Phoenix, Arizona, sightings of 1997. Even Michael Shermer, publisher of *Skeptic* magazine endorses this film.



CREATING PROSPEROUS COMMUNITIES: Small-Scale Cooperative Enterprise in Maleny

Produced by Alister Multimedia for the Prout Community Settlement Cooperative, Maleny, Australia, 2002 (25mins)
Price: A\$35.00; US\$25.00 (inc. p&h)
Availability: Australia—Alister Multimedia, PO Box 177, Maleny, Qld 4552, tel +61 (0)7 5494 2887, website <http://www.alistermultimedia.net>

This is an inspiring 25-minute documentary, touching on the history, challenges and triumphs of the cooperatives in the remarkable Sunshine Coast hinterland town of Maleny and environs. The film includes cooperative enterprises covering barter (the LETS system), healthy foods and products, finance and credit, landcare and environment, education and more. If you are interested in cooperatives, this is a must-see.

PLANET X

Produced by Robert Sepehr, USA, 2002
(70 mins, PAL VHS & NTSC VHS)

Price: US\$20.00 + s&h

Availability: Order via the website <http://www.planetxvideo.com>

The subject of Planet X is in the minds of many NEXUS readers at present, and this video certainly goes a long way to putting clarity into who is saying what on this subject. Researchers interviewed include Mark Hazlewood, Nancy Lieder, Lloyd Pye, Jason Martell and James McCanney. There is very good background material on all aspects of Planet X in relation to Zecharia Sitchin's research. Robert has done well to bring together a compilation of differing, and sometimes contradictory, opinions. The quality of both the information, and the production is excellent.

MAGICAL EGYPT: A SYMBOLIST TOUR – Episode 1: The Invisible Science with John Anthony West

Magical Egypt, USA, 2002 (58mins, PAL & NTSC)

Price: US\$19.95 + s&h

Availability: Order via the website <http://www.magicalegypt.com>

Did ancient Egypt inherit its mysterious buildings and abilities from an even older civilisation? In this video, John Anthony West passes on his extensive knowledge of and insights into symbolist Egypt, during a visually rich journey set against temples, hieroglyphs and pyramids. Topics covered include Schwaller de Lubicz's research, organic geometry (e.g., Fibonacci series, harmonics) and sacred science. A film for both sides of your brain!

CD-ROM

Reviewed by Duncan Roads

VIRTUAL EGYPT: A 360° Cyber tour of the Sacred Sites of Ancient Egypt with John Anthony West

Magical Egypt, USA, 2002 (CD-ROM, 2-CD set)

Price: US\$24.95 + s&h

Availability: Order via the website <http://www.magicalegypt.com>

A must-have for all Egyptophiles, but only if you have a PC (sorry, Mac users). This is truly a visual feast of movies and photos of the major ancient Egyptian sites, including the Sphinx and Great Pyramid, Abu Simbel, Dendera, the Oserion (my favourite), Luxor, Abydos and Karnak, as well as the Cairo Museum. I particularly liked being able to zoom in on the photos.



REVIEWS

MUSIC

Reviewed by Richard Giles

ZEN CONNECTION

by various artists

One World Music, Australia, 2002
(2CDs, 148mins)

Distributors: **Australia**—New World Music, tel (02) 9565 4522, website <http://www.oneworldmusic.com.au>;

UK—New World Music, tel 01986 781682; **USA**—New World Music, tel (303) 415 1040

With the many double-set CD collections released today, this offering from One World rates as one of the better I've heard. It comes in a beautiful "clamshell" box presentation. There are melodies and beats from around the planet, from Western chillout grooves to Eastern fusion, across to the sounds of ambient techno New Age relaxation. Compiler Leigh Wood has picked a strong and varied bunch of fresh musical sounds to engage the listener.

ASIAN GROOVE

by various artists

Putumayo, USA, 2002 (47mins)

Distributors: **USA**—Putumayo World Music, tel 1888 7888 8629, website <http://www.putumayo.com>;

Australia—MRA, tel (07) 3849 6020; **UK**—Pinnacle Imports, tel 01689 870622

Putumayo's *Asian Groove* features many of the new composers in the invigorated Asian music scene. I have reviewed several Indian and Asian compilations in the last two years and find this one to be exciting and adventurous without being repetitive. Much of what's here is from Indian and Pakistani traditions, with cutting-edge styles put together from new-blood Asian musicians—among them, Nitin Sawhney, Bally Sagoo, Deepak Ram, Mo' Horizons and Badar Ali Khan. Excellent, funky album.

BHAGAVAN DAS NOW

by Bhagavan Das

Karuna Records, USA, 2002 (64mins)

Distributors: **USA**—Karuna Music, tel (310) 456 9063, <http://www.triloka.com>;

Aust—MRA, tel (07) 3849 6020; **UK**—Proper Music, tel 08704 440799

Bhagavan Das is taking the US musical world by storm with his reworking of traditional Indian sacred songs, converting them to a newer format. Even names like Madonna are using his sounds in their music. In the age of gripping materialism, Bhagavan Das's sacred sound is making headway against pop songs devoted to death, drugs or destruction. Das is backed by guitar, keyboards, bass and popular Indian instruments such as *tabla*, *dolak* and

sarangi. It's good to see this style making inroads into the world music scene. This album reasserts the sacred in music.

THE JOURNEY

by Jerry Brunskill

New World Music, USA, 2002 (52mins)

Distributors: **USA/Aust/NZ/UK**—

New World Music, website <http://www.newworldmusic.com>

The *Conversations with God* series has taken the book publishing world by surprise, reaching millions around the globe. If you haven't read the books, you probably have a best friend who has. Neale Donald Walsch, the author, discovered the God in everything around us. This CD translates those words of *Conversations...* into a musical format, touching us to the core as the books have done. "Does Your Heart Ache to Tell the Truth About Me?", the first track, sums up the sentiment of the recording. It's movingly done, with some simple truths about mankind and the relationship with the Divine. An impressive musical narration.

UNFOLDING

by Axiom of Choice

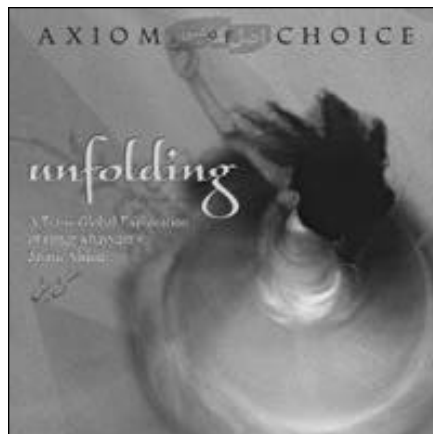
Narada World, USA, 2002 (51mins)

Distributors: **USA**—Narada, tel (414) 961 8350, <http://www.narada.com>;

Australia—MRA, tel (07) 3849 6020;

UK—Mac Two, tel 020 7377 5841

Axiom of Choice—led by Persian émigrés to the USA, Loga Ramin Torkian, Mammad Mohsenzadeh and vocalist Mamak Khadem—has released a second gorgeous album, a follow up to *Niya Yesh* (see review, 7/06). The group incorporates instruments outside the Persian classical tradition—even subtle electronica. Inspiration for their lyrics is the illuminating poetry of Omar Khayyám. Their instruments include the quarter-tone guitar, *saz* and *diwan* (Middle Eastern lutes), the Armenian *duduk*, clarinet, electric cello and various global percussion devices. This is rich, exotic Persian music with amazing, haunting melodies.



Continued from page 20

in late 1987, the German equivalent of the FDA had such serious reservations about Prozac's safety that it refused to approve the antidepressant. The reason was that Lilly's studies showed that previously non-suicidal patients who took the drug had a fivefold higher rate of suicide and suicide attempts than those on older antidepressants, and a threefold higher rate than those taking placebos. Lilly's own figures indicated that one in 100 previously non-suicidal patients who took the drug early in clinical trials developed a severe form of anxiety and agitation called *akathisia*, causing them to attempt to commit or actually commit suicide during the studies.²²

Using figures on Prozac from both Lilly and independent research, Dr David Healy, Director of the North Wales Department of Psychological Medicine at the University of Wales and an expert on the brain's serotonin system, estimated that "probably 50,000 people have committed suicide on Prozac since its launch, over and above the number who would have done so if left untreated".²³

Dr Peter Breggin, the eminent psychiatrist and author of *Toxic*

Psychiatry: Talking Back to Prozac, stated: "I have no doubt that Prozac can cause or contribute to violence and suicide. I've seen many cases. In a recent trial, six per cent of the children became psychotic on Prozac. And manic psychosis can lead to violence."²⁴

And yet, as of January 3, 2003, the FDA approved the use of Prozac to alleviate depression in children between seven and 17 years of age. It also approved it for children with obsessive-compulsive disorder.

Psychiatrists in the US and Australia have already been prescribing the world's best-known antidepressant (and similar competitors) to their youngest patients. The inclusion of child-specific information on Prozac's FDA-mandated label means that more doctors, not just depression specialists, may prescribe it. Up to 2.5% of US children and 8% of teenagers suffer from depression.²⁵

What catastrophes are in the making when we follow these trends? Will we be facing news headlines reporting on children who have gone into murderous rages, perhaps taking their lives along with the lives of others? It has already come to light that the majority of US school shooters were prescribed SSRIs.

The growing incidence of depression and anxiety amongst girls means that more SSRI scripts will be written. Teenage girls are further caught in a "catch 22", since depression is also a side effect of hormonal imbalances as well as the Pill. And how many girls and young women diagnosed with PMDD and then put on Prozac/Sarafem or one of the many other SSRIs will one day find themselves facing a breast cancer diagnosis?

Restoring Young Women to Health

It is truly terrifying to think that drug companies are enthusiastically targeting young women, teenage girls and now children as young as eight as a lucrative market for their SSRI drugs. If we continue to allow ourselves and our children to be hypnotised by the rhetoric and trickery of the medical and pharmaceutical profession, great health disasters and human tragedy await us.

The real goal (in terms of the main theme of this article) is to restore girls and young women to health. Menstruation is a powerful expression of a woman's true self. The female reproductive system is delicate and can easily teeter out of balance when deprived of adequate nutrition or put under duress.

The Medical Assault on Young Women

Our daughters, instead of resorting to taking a pill to mask important warning signs, must be taught to make healthy choices through diet and lifestyle. Competent holistic health practitioners are important allies in regaining hormonal health.

Even more challenging is the task of healing deeply held cultural myths. If women are truly to regain and maintain their health and love for their bodies, old myths and superstitions must be exorcised from our collective unconscious mind. The erroneous conscious and unconscious beliefs that are held about the female anatomy are passed on from generation to generation. Our daughters are the recipients of this legacy—unless we choose to teach them otherwise.

By healing these misconceptions, women can truly honour and appreciate their bodies—an important prerequisite for overall hormonal balance.

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About the Author:

Sherrill Sellman is the author of the best-selling book, *Hormone Heresy: What Women Must Know About Their Hormones*. Her new book, *Mothers: Prevent Your Daughters From Getting Breast Cancer*, will be released in April 2003. She is a regular contributor to NEXUS. Her articles on the Pill and HRT were published in NEXUS 4/04-05 and 9/01 respectively.

Sherrill is on a national Australian lecture tour from March to May 2003. Visit her website at <http://www.sellman.com> for details about this and other tours for 2003, or email her at golight@earthlink.net. To subscribe to Sherrill Sellman's monthly HormoneWise e-Digest, send an email to hwise@sellman.com.

Continued from page 52

essays on origins—of life and of humans. They are two of the world's most sensitive areas of scholarship and debate, producing some of the most vitriolic exchanges in all of academia. But vitriol, like might, doesn't make right.

I once knew a baseball player who'd pitched a no-hitter against a seriously inferior team. Upon being criticised for the obvious imbalance between his abilities and those of his opponents, the pitcher shrugged and said, "A no-hitter is a no-hitter, even against Lighthouse for the Blind." And so it is with a mistaken belief. If millions believe a thing, that doesn't make it correct.

I believe that the facts, if fairly evaluated, will over time prove that humans—and indeed, life itself—did *not* originate on Earth, and that *nothing* has macroevolved on Earth. It has all been brought here and left to fend for itself, then replaced when events required the introduction of new forms. No other theory suits the facts nearly as well.

As for humans (the object of this essay), look back to the Miocene epoch, where the earliest traces of our ancestors supposedly originate. Apes dominate.

Look at the fossils—the so-called "pre-humans"—from the Pliocene epoch, starting 5.0 million years ago. Other than bipedal walking, all of their physical aspects shout out "ape roots". Look at today's tracks, sightings and encounters with living hominoids, Bigfoot and others. These all-too-real creatures will one day be proved to have a direct link back to the Miocene—which, at a stroke, will eliminate any possibility that humans and apes share any kind of common ancestor.

We humans are not indigenous to planet Earth. We were either put here intact or we developed here, but we did not evolve here. Our genes make clear that we've been cut-and-pasted from other, non-primate, non-Earthly species.

Personally, I believe that the work of Zecharia Sitchin (*The Earth Chronicles*) comes closest to a plausible explanation. But even if some aspects of what he says are wrong, or even if all of it someday is proved to be wrong, that won't change the basic facts that his work—and my own work—address.

Humans are not primates. We do indeed stand apart as a "special" creation, long espoused by theologians and now by certain credentialled scientists. The only question left hanging is, of course:

who or what was the creator? I don't think I'll be privileged to learn that in my lifetime. But I'm confident I'm within reach of the next best answer.

I'm confident that we *were* created by invasive genetic manipulation.

About the Author:

Lloyd Pye, born in 1946 in Louisiana, USA, is a researcher, author, novelist and scriptwriter. His independent studies over more than three decades into all aspects of evolution have convinced him that humans did not evolve on Earth, or at least are the product of extraterrestrial intervention.

His book, *Everything You Know Is Wrong – Book One: Human Origins*, can be ordered through the website <http://www.iUniverse.com> or via Barnes & Noble at <http://www.bn.com>. His article, "Evidence for Creation by Outside Intervention", which looks at the origin of early life on Earth, was published in NEXUS 9/04. Part One of his essay, "Darwinism: A Crumbling Theory", was published in NEXUS 10/01.

Lloyd Pye is scheduled to speak at the 2003 NEXUS Conference in Amsterdam in March. Visit Lloyd's website at <http://www.lloydpye.com>.

Continued from page 56

The magical powder of projection was manufactured by the priestly Master Craftsmen of the temples (the Guardians of the House of Gold) for the express purpose of deifying the kings...and it re-emerges today as the primary new substance in fields ranging from cancer treatment to stealth aircraft, and will provide the essential "exotic matter" required for warp-drive space travel in hitherto insurmountable dimensions of space-time.

In *Lost Secrets of the Sacred Ark*, the story of monatomic *mfkzt* is told in detail from the earliest times to the present day, with specific reference to the importance of the biblical Ark of the Covenant. There are many mysteries associated with this enigmatic coffer—not the least of which is the manner of its original creation at Mount Horeb.

The book of Exodus explains that, when Moses destroyed the Israelites' golden calf, God issued a specific directive forbidding the manufacture of graven images which represented any living creature on Earth or in Heaven. But then, immediately after this, God seemingly instructed the craftsman Bezaleel to construct the Ark of the Covenant, specifying (in complete contra-

diction of the directive) that two golden cherubs should surmount its lid. What then (if not angels, as commonly thought) were the arcane cherubim? How did they have the power to produce the devastating Ark-light of the presence, which wreaked such havoc on the subsequent battlefields?

Through our present understanding of high-spin elements, it becomes apparent that the biblical Ark (along with similar devices in Egypt and Babylonia) was directly responsible for the scientific manufacture of the monatomic fire-stone (the *shem-an-na*), while also providing its own storage facility for the substance—hence the Ark's levitational and superconductive powers.

From the time of Moses, the Ark's history can be followed to the Temple of Jerusalem. There, as described in the Septuagint, King Solomon used its powers to "provide bread for the household of the King of Tyre", who in return supplied ships, horses and chariots for the Royal House of Judah.

Subsequently (despite what many have written to the contrary), the Ark can be tracked for another 2,000 years to its astonishing role in the history of the Knights Templars in Europe. Its last historical record comes from the early 14th

century and, from this, its final resting place is determined...a resting place which could never have been understood until this present era of quantum physics and the superconductor research of high-spin monatomic elements.

About the Author:

Laurence Gardner, a Fellow of the Society of Antiquaries, is a constitutional historian, lecturer and broadcaster. Distinguished as the Chevalier de St Germain, he is attached to the European Council of Princes as the Jacobite Historiographer Royal. In the artistic domain, he has been Conservation Consultant to the Fine Art Trade Guild, while in the world of music his libretto compositions have been performed at London's Royal Opera House, Covent Garden. A Knight Templar of St Anthony and Prior of the Sacred Kindred of St Columba, Laurence is an internationally best-selling author, with national press serialisation and acclaimed works in many languages. His new book, *Lost Secrets of the Sacred Ark*, is to be published by Element/HarperCollins in February 2003 (ISBN 0-00-714295-1). (See his related series of articles, "Star Fire: Gold of the Gods" in NEXUS 5/06, 6/01, 6/02.)

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